

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1218.—VOL. XXVIII.

LONDON, SATURDAY, DECEMBER 25, 1858.

(STAMPED.....SIXPENCE.
(UNSTAMPED.....FIVEPENCE.

MR. JAMES CROFTS, MINING AND SHAREBROKER,
No. 1, FINCH LANE, LONDON (established 14 years), TRANSACTS every kind of BUSINESS IN MINING SHARES, but, not being a DEALER, BUYS AND SELLS only on orders confided to him.

The Mining Market is in a highly encouraging state for investors, and many mines are yielding large profits on late purchases, for a continuance of which there is still a considerable margin.

Mr. Crofts refers the readers of the Journal to his article on the changes and aspects of the mining market, on page 850, in which will be found general and particular discussions on the value of mining property, on, or irrespective of, the market; his opinions being backed by experience, but not offered as infallible. He will be happy to advise capitalists into safe investments at all times.

Mr. Crofts has FOR SALE, belonging to the estate of a gentleman deceased, 1000 shares in Crown Dale, and 6 shares in Brynford Hall (dividend mine), absolutely, and for which offers are solicited.

MR. JAMES LANE, No. 29, THREADNEEDLE STREET,
MINING SHARE DEALER.

JAMES B. BRENCHEY, of 19, TOKENHOUSE YARD,
LONDON, is a BUYER or SELLER IN DIVIDEND AND PROGRESSIVE MINES, for CASH. Bankers: London and Westminster.

DIVIDEND MINES, well selected, are the BEST of all PUBLIC INVESTMENTS, paying, as they do (in dividends every two or three months), from 20 to 30 per cent. per annum. NON-DIVIDEND MINES, carefully chosen, frequently advance in price 500 per cent., or more.

PETER WATSON, having 14 years' experience in every department of mining and its management, together with an extensive and regular correspondence with mining agents and others in Cornwall, Devon, and elsewhere, is enabled to judge of and select mines of intrinsic value.

A SPECIAL REPORT (WEEKLY) WILL APPEAR IN
PETER WATSON'S "MINING CIRCULAR," by his own Agents. ABRIDGED REPORTS will also be given, and important information on the present and future operations and prospects of mines throughout Cornwall and Devon, with advice thereon as to purchase or sale of shares.

Those who desire to have copies regularly sent them will be supplied for an annual subscription of £1 1s., or 6d. per copy. PETER WATSON.
English and Foreign Stock, Share, and Mining Offices,
3, Old Broad-street, London, E.C.

MR. H. B. RYE SPECIALLY RECOMMENDS to his clients and the public the FOLLOWING MINES for IMMEDIATE INVESTMENT, as they are of the soundest character, and undoubtedly first-rate prospects:—

Bryntall.	Wheat Kitty.	East Trefusis.
United Mines.	Wheat Reeth.	Ding Dong.
77, Old Broad-street, E.C.	Wheat Grenville.	North Rosekar.

THE FOLLOWING MINES are WORTH NOTICE at
PRESENT PRICES:—

Bell and Lanthorn.	East Trefusis.	South Condarrow.
Buller and Basset United.	Mary Ann.	Tolvadden.
Bryntall.	Margaret.	Tolcarne.
Bell and Lanthorn.	North Dolcoath.	Treylon Consols.
Craddock Moor.	North Rosekar.	Wheat Trelawny.
Camryth.	North Wheat Croft.	Wheat Charlotte.
Ding Dong.	North Levant.	Wheat Kitty (Leland).
East Russell.	Old Tolgu United.	Wheat Mary.
East Providence.	Providence.	Wheat Margery.
	South Frances.	Wheat Edward.
	South Cudra.	Wheat Mary.

In consequence of the Christmas holidays a limited amount of business has been transacted in the money market, and it is difficult to give correct buying and selling prices.

All orders promptly attended to. Commission, 1½ per cent.

MR. LEEHAN, Mine Broker and Share Dealer, 4, Cushion-court, Old Broad-street, E.C.

THOMAS ROACH, MINING AGENT,
37, OLD BROAD STREET, E.C.

MR. R. LINTHORNE, ENGLISH AND FOREIGN MINING
AGENT, 3, ADAM'S COURT, OLD BROAD STREET, LONDON.
N.B. Business transacted in every description of stock and shares.

JOHN GLEDHILL AND CO., MINE AGENTS, SHARE
BROKERS, AND GENERAL DEALERS.
MINING RECORD OFFICE, 12, SOUTH PARADE, LEEDS.

Mines well selected are the best investments, paying from 15 to 30 per cent. on the outlay. They have to OFFER SHARES in most of the DIVIDEND AND PROGRESSIVE MINES, and are ready to give every information relative to all mining matters.
Dated Dec. 24, 1858.

HENRY GOULD SHARP, 22, POULTRY, LONDON, E.C.,
will punctually attend to BUYING or SELLING instructions in BRITISH and FOREIGN STOCKS, SHARES, and SECURITIES of every marketable description at the closest dealing prices.

SOUND ADVICE and RELIABLE INFORMATION to CAPITALISTS seeking safe and profitable investments. BRITISH MINE SHARES pay 15 to 25 per cent. per annum in DIVIDENDS, and often advance many hundreds per cent. on the outlay a few months after purchase.

Commission on buying and selling transactions 1½ per cent.
Bankers: London and Westminster Bank, Lothbury, London, E.C.

TO CAPITALISTS.—RELIABLE INFORMATION may be obtained on application to the undersigned, in respect of MISCELLANEOUS SECURITIES generally. BANKS, INSURANCE SHARES, LAND COMPANIES, MINES (British and Foreign), RAILWAYS, FOREIGN STOCKS, and the PUBLIC FUNDS BOUGHT and SOLD at the closest market price, and at moderate commission. References given and required. JOHN BATTERS, Stock and Sharebroker.
26, Throgmorton-street, London, E.C.

MR. WILLIAM BROWNE, JUN. (Successor to Mr. W. C. Foulkes,
late of 58, Old Broad-street, London), has REMOVED to 31, BROAD STREET BUILDINGS, LONDON (a few doors from 58, Old Broad-street), and BUYS and SELLS MINING, RAILWAY, and OTHER SHARES, and every other description of transferable property, on commission only.

ROBERT OLDREY, STOCK, SHARE, AND MINING
BROKER, 8, FINCH LANE (adjoining the City Bank), LONDON, E.C.
Terms of commission for buying or selling shares in mines, railways, or banks, forwarded on application. Bankers: London Joint-Stock Bank.

MR. ABSALOM FRANCIS,
MINE AGENT AND SURVEYOR, TALYBONT, CARDIGANSHIRE.

MR. JOHN ANTHONY, MINING ENGINEER.
ESTIMATES AND SPECIFICATIONS FOR ALL KINDS OF
MACHINERY PREPARED.
11, ARUNDEL CRESCENT, PLYMOUTH.

MR. E. GOMPERTS HAS BUSINESS to TRANSACT in most of the MINES usually in REQUEST in the MINING MARKET.
3, Crown-court, Threadneedle-street.

FIFTEEN to TWENTY, and even TWENTY-FIVE PER CENT. PER ANNUM
upon current value of shares, in CORNISH TIN and COPPER MINES.
Dividends payable two-monthly or quarterly.

MR. R. TREDINNICK, MINING ENGINEER, SENDS HIS
SELECTED LIST OF SOUND PROGRESSIVE AND DIVIDEND SHARES upon receipt of a Fee of One Guinea.

Review of Cornish and Devon Mining Enterprise, 5s. per copy.
Maps per post of the Buller and Basset, Great Vor, Alfred Consols, the Providence and Margaret, South Canadon, and the Devon Great Consols Districts, 2s. 6d. each.

Cornish Mines, well selected, pay better than any other description of securities, are free from risks, and entail less responsibilities than banks and other joint-stock companies. Shares bought and sold on commission of 2½ per cent.

Money advanced at 10 per cent. annually, for short or long periods, upon approved Mining Shares.—4, Austinfriars, Old Broad-street, London, E.C.

MINING SHARES FOR SALE, FOR IMMEDIATE CASH:—
10 Tincroft, £23½. 25 Harriett, 17s. 6d. 10 North Down, £23½.
10 Hingston Down, £23½. 50 Grenville, 31s. 3d. 50 Adelaide, 26s. 6d.
10 South Can. Bren, £23. 50 Vale of Towry, 13s. 1 North Rosekar, £23½.
10 Kelly Bray, £23½. 100 West Par, 16s. 6d. 10 North Robert, £23½.
5 East Russell, £23½. 50 Great Hewas, 19s. 6d. 5 Tolvadden, £26½.
50 Lady Russell, 31s. 20 St. Day United, 11s. 6d. 20 Great Wheal Vor, 14s.

WANTED:—
1 Granbler, £140. 20 Marke Valley, £23½.
2 North Frances, £232½. 100 Cath. & Jane, 5s. 50 Tolcarne, 14s. 6d.
1 Trevoile, £15. 1 United Mines, £122½. 100 South Lady Bertha, 6s.

W. MICHAEL having inspected East Russell and Lady Bertha Mine on Tuesday last, is prepared to furnish his friends with reports of same, on receipt of £2 2s. for each mine. Apply to W. MICHAEL, 3, Austinfriars, London, E.C.—December 24, 1858.

GEORGE MOORE

1, CROWN COURT, THREADNEEDLE STREET.
GEORGE MOORE will SELL the following SHARES, or any part, to-day, at quoted prices, FREE OF ANY COMMISSION:—

1 Carn Breu, £70.	2 North Rosekar, £21½.	1 West Seton, £297½.
5 Great So. Tolguas, £13½.	5 Par Consols, £16½.	1 Wheal Buller, £140.
20 Great Wheal Vor, 15s.	1 Providence, £22½.	2 Wh. Mary Ann, £45½.
	50 Vale of Towry, 12s. 9d.	

DIVIDEND.
10 Camborne Veau (an offer wanted).
1 East Basset.
20 East Gannet Lake, 30s.
25 East Rosewarne.
20 East Russell.
20 North Robert.

NON-DIVIDEND.
20 Gawton, 6s. 9d.
10 Great Hewas, 11s. 9d.
10 Great Alfred, £3½.
50 Holmbush.
50 Lady Bertha, 30s. 9d.
20 North Robert.

PURCHASERS of undoubted respectability can register transfers and receive CERTIFICATES of same previous to PAYMENT.
In any business that GEORGE MOORE is favoured with, in which he is the buyer, he will give CASH ON RECEIPT OF TRANSFER.

MR. JOSEPH JAMES REYNOLDS,
No. 1, ROYAL EXCHANGE BUILDINGS, LONDON, E.C., ENGLISH AND FOREIGN STOCK, RAILWAY, AND MINING SHAREBROKER, begs to inform his friends and the public that a FAVOURABLE OPPORTUNITY now offers itself to capitalists for INVESTMENT in many undertakings of a substantial character, paying large dividends. There are also others of a progressive character, well deserving attention. Every information can be obtained at his office, which his practical experience enables him to give respecting all mines worthy of consideration.

JAMES HERRON has FOR SALE the following SHARES, at
the prices quoted, and FREE OF COMMISSION:—

5 Bosora.	50 Great Sheba, £3½.	20 Tamar Consols, 20s. 9d.
10 Bryntall, £11½.	10 Hingston Down, £23½.	10 Tincroft, £3 13s. 9d.
10 Bolling Well, 21s. 6d.	15 Holmbush.	20 Tolcarne, 16s. 9d.
(including call).	10 Harriett, 19s. 6d.	20 Treveatha, 14s. 6d.
10 Camborne Consols.	20 Kelly Bray, £23½.	2 Trelawny, £29½.
100 Cathell, 1s. 9d.	15 Lewis, £23½.	25 Vale of Towry.
100 Castle and Jane, 5s. 10d.	20 Lady Bertha, £1 8s. 9d.	12 West Tolvadden.

This being the last appearance this year of Mr. HERRON'S list, he takes the opportunity to thank his friends and the public generally for the support it has received, and to inform them it will be continued as usual. Unfortunately, it has been a very trying year for most persons connected with British mining enterprise, especially those who had invested heavily in mines of a progressive character, and who were obliged to make great sacrifices to enable them to carry out their speculations. However, the prospect is daily becoming more cheering, and next year bids fair to be one of the most prosperous in the annals of mining adventure. The grand secret of success consists in exercising proper precaution in selecting mines situated in good districts and under skilful and honest management, and to have sufficient energy and perseverance to give the objects for which the mines were set to work a fair trial. These views cannot be better illustrated than by referring to Bryntall, Wheal Charlotte, and East Russell, which a few months back were considered by many to be almost forlorn hopes, but which, by perseverance and skill, now rank among the leading speculations of the day.
2, Adam's-court, Old Broad-street, December 24, 1858.

MESSRS. VIVIAN AND REYNOLDS, MINE AGENTS,
68, OLD BROAD STREET, LONDON, E.C.

MESSRS. VIVIAN AND REYNOLDS are enabled, through the long experience of Mr. W. C. Vivian as an underground agent and manager of mines in Cornwall, and in various foreign countries, to afford information on most important mining districts; and to inspect and report on mines. They are also enabled, by the several years' acquaintance of Mr. J. J. Reynolds, jun., with the transactions of the London share market, to obtain every advantage for those who may wish either to buy or sell mining or any other description of stock. Messrs. VIVIAN and REYNOLDS have daily information from the principal seats of mining, which is at the service of those who may honour them with their confidence.

MR. C. POWELL, MINING SHAREBROKER,
2, SPREAD EAGLE COURT, FINCH LANE, LONDON, E.C.
C. POWELL'S Selected List of Dividend and Progressive Mines, daily Closing Prices of same, together with terms of commission, furnished on application.
Dated December 24, 1858.

MR. EDWARD COOKE, MINING SHAREBROKER, &c.,
54, THREADNEEDLE STREET, LONDON.
The current quotations of the day sent gratis on application.—Dated Dec. 24, 1858.

MR. M. S. RICHARDS, BRITISH AND FOREIGN STOCK,
RAILWAY, AND MINING SHAREBROKER, No. 27, AUSTINFRIARS, LONDON, E.C., has the undermentioned MINING SHARES FOR DISPOSAL, or any part thereof, on Tuesday morning next, at the PRICES QUOTED:—

2 So. Wh. Frances, £245.	20 E. Providence, 20s. 6d.	20 Treveatha, 19s. 6d.
2 Wh. Trelawny, £283½.	10 Wh. Edward, £2 15s. 6d.	20 Tolvadden, £23½.
20 Kelly Bray, £23½.	50 Gawton, 7s. 9d.	10 Calstock Cons., £43½.
50 Lady Bertha, 30s. 6d.	25 Wheal Arthur, 12s. 9d.	20 North Trelawny, 20s.
10 East Russell, £27½.	20 Wheal Wrey, £23½.	10 East Llanfoulis, £3½.
10 Hingston Down, £23½.	50 Worthing, 5s. 13½d.	25 Wheal Sidney, 26s. 6d.
50 Vale of Towry, 12s. 9d.	25 Tavy Consols (an offer wanted).	25 Wheal Harriett, 17s. 6d.
20 No. Robert, £2 16s. 6d.	1 Old Tolguas, £30.	10 Tolcarne, 16s. 6d.
		10 Tolvadden, £23½.

Mr. RICHARDS, in introducing himself to the holders of stock of the above description, as a sharebroker, begs most respectfully to solicit a share of public patronage, and for so doing his charges will be 1½ per cent. on all stock bought and sold up to 1000. In value; above that sum 1s. 10d. per share only will be charged.
Mr. RICHARDS undertakes to furnish full particulars of all business done, and guarantees to render a faithful account, and at net prices. In order the more effectually to assist his clients in the country in their selection of stock, which will be from time to time advertised for sale, he intends establishing a rule not to dispose of any advertised stock until after Tuesday morning's post, and should there be more than one claimant for any particular lot it will be offered pro rata, to each party desirous of purchasing.

Mr. RICHARDS also begs to remind his friends that he has secured the services of a thoroughly practical mining agent (of 20 years' experience) to report for him on such mines as his clients may be disposed to invest in, for which a mere nominal sum will be charged, and which Mr. RICHARDS considers very advisable to adopt before he ventures to recommend his friends to purchase, either in dividend or progressive mines.
All letters or communications addressed to Mr. M. S. RICHARDS, 27, Austinfriars, London, will receive immediate attention.—Dated, Dec. 24, 1858.

TO CAPITALISTS.—T. FULLER AND CO.,
No. 51, THREADNEEDLE STREET, LONDON, continue to TRANSACT BUSINESS in BANKING, MINING, RAILWAY, and OTHER SECURITIES, many of which pay from 12½ to 30 per cent.; those of a progressive character frequently advancing in price from 50 to 500 per cent.

FOR SPECIAL SALE, a few shares in the celebrated Cumberland Black-Lead Mine (Limited). These shares present every prospect of a great rise. Every information given at the office, where specimens of the lead may be seen, worth from £3500 to £4000 per ton.

WHEAL CREBOR.—A FEW SHARES FOR SALE in this very promising speculation.—Address, "W. X.," Mining Journal office, 26, Fleet-street, E.C.

MESSRS. A. J. HUTCHINGS AND CO'S
PATENT IMPROVED WIRE ROPE.

SOLE MAKERS TO THE
LORDS OF THE ADMIRALTY, THE FRENCH AND TURKISH GOVERNMENTS,
and the principal Colliery Proprietors throughout the kingdom.

MANUFACTURED BY MILL WALL, POPLAR, LONDON.
ROUND and FLAT ROPES of every description, suitable for mining operations or other purposes, GALVANISED or UNGALVANISED, MANUFACTURED upon the newest and most improved machinery, ensuring greater pliability, durability, and strength; and is admitted by the principal colliery proprietors to be far superior to any other kind of wire-rope. The superiority of these ropes over hempen ones, in point of strength, lightness, durability, and cost, is admitted by all who have tried them.

GUIDE ROPES, SIGNAL CORD, LIGHTNING CONDUCTORS, &c.

MR. T. P. THOMAS, MINING AUCTIONEER,
2, CROWN COURT, THREADNEEDLE STREET, LONDON.

MR. T. E. W. THOMAS, MINING AGENT AND GENERAL
MINING SHARE DEALER,
11, DALE STREET, LIVERPOOL.

JOHN ROBERT PIKE,
MINING AND GENERAL SHARE DEALER,
3, PINNER'S COURT, OLD BROAD STREET, LONDON, E.C.

Now Ready,
IS MINING FOR METALLIC ORES A LEGITIMATE AND PROFITABLE
CHANNEL FOR INVESTMENT? OR IS IT NOT? FACTS AND FIGURES.
May be had gratis on application, either personally or by letter.

WEST END MINE AND QUARRY OFFICES, 10, REGENT STREET, S.W.,
PAUL MALL.

MESSRS. BRUNTON AND CO., ENGINEERS AND MINERAL
SURVEYORS, undertake the MANAGEMENT and WORKING OF MINES, QUARRIES, &c., and CONDUCT THE LONDON AGENCY of all MINERAL PROPERTIES in their offices with system, economy, and regularity.

Messrs. BRUNTON and Co. beg to inform proprietors of mines, &c., that the business of these properties is carried on in their office upon the following principles, viz:—
Accounts systematically and closely made up for the proprietors.
Statements in detail, and clear summaries of finance and expenditure.
Entire and impartial openness of books, reports, and documents, to all shareholders, for perusal or extract.

Immediate communication of any important occurrence to the shareholders.
MINERAL PROPERTIES SURVEYED, and ESTIMATES OF MACHINERY, PLANT, and COSTS OF WORKING FURNISHED.

TWENTY PER CENT. DIVIDEND SILVER LEAD MINE,
CARDIGANSHIRE.—WANTED, a PARTNER with SIX HUNDRED POUNDS, the capital to be employed in putting down the required machinery, and further working the mine. The ore now raised with four men will leave a computed profit of 20 per cent. on two months' workings. The mine is well opened, and a very strong rich lode in one of the most celebrated dividend-paying districts in Cardiganshire, on the same lode, and adjoining one of the celebrated mines that has been making £20,000 per annum profit. There is ample land for working, with increasing prospects and continued rising profits. Further information will be given to principals on application to "A. B.," Mining Journal office, 26, Fleet-street, London, E.C.

TO CAPITALISTS.—AN OPPORTUNITY FOR INVESTMENT
in NORTH WALES, for £3000 to £4000, presents itself, under most valuable advantages.—Address to Mr. C. FERGUSON, Mining Journal, 26, Fleet-street, London.

TO BE SOLD, a very valuable MANGANESE and COPPER
MINE. Also, FOUR HUNDRED TONS of MANGANESE of good quality, ready for market.—Apply to the proprietor, Captain THOMAS TONKIN, Glandore Leap, county Cork, Ireland.

BLÉNDE OR BLACK JACK—FOR SALE, EIGHTY to
ONE HUNDRED TONS of the above, samples of which, with price, &c., may be had on application to POWING, STEPHENS, and Co., Kenwyn-street, Truro, Cornwall. Offers will be received up to the 31st December.

TO COAL PROPRIETORS.—WANTED, a SITUATION
as COLLIERY AGENT, by a young man who has been connected with collieries, and has had a good insight into different modes of working and ventilation, who also understands land and mineral surveying, and is a good accountant.—Address, "Y. Z.," Mining Journal office, 26, Fleet-street, London, E.C.

TO ALKALI AND SULPHURIC ACID MANUFACTURERS.
—The ADVERTISER has had the sole management of a large manufactory for several years, and is competent to PLAN, ERECT, or MANAGE a similar concern of any magnitude, and on the most improved principles, is OPEN to TREAT with manufacturers having works at present in operation, or capitalists about to erect the same, in any part of England or abroad. Highly respectable references as to ability and character will be given.—Communications may be addressed to "X. Y.," care of Mr. Jas. Newton Warburton, 30, Cumberland-row, Newcastle-on-Tyne.

TO COPPER AND LEAD SMELTERS.—The ADVERTISER,
who has had considerable experience in smelting copper, lead, and silver ores, which he thoroughly understands, is OPEN to a RE-ENGAGEMENT in a SMELTING WORKS. The highest references.—Address, "J. L.," Thomas Haddock, Esq., solicitor, St. Helen's, Lancashire.

PARTNER WANTED.—A GENTLEMAN possessing a VALUABLE and EXTENSIVE COLLIERY in NORTH WALES is DESIROUS of EXTENDING his WORKS, and for that purpose of meeting with ONE or MORE PARTNERS, with capital, to join him. The strictest references will be given and required.—Address, "Y. Z.," Post-office, Rossett, Wrexham.

WANTED, a PERSON of intelligence, who has a PRACTICAL
KNOWLEDGE of the ROLLING of COPPER and YELLOW METAL, as a MANAGER of the COPPER AND YELLOW METAL ROLLING AND HAMMER MILLS, at Llanelly, South Wales. He must be well acquainted with machinery and the management of mill work in general. Testimonials of character and ability will be required.—Application to be made, either personally or otherwise, to C. W. NEVILL, Esq., Copper Works, Llanelly, South Wales.

WANTED, a CLERK to CORRESPOND in the FRENCH and
GERMAN LANGUAGES, and having a KNOWLEDGE of the IRON and COAL TRADE.—Apply by letter, stating age and salary required, to JOHN ROBERTSON and Co., Newcastle-on-Tyne.

WANTED, as MANAGER, a person THOROUGHLY and
PRACTICALLY ACQUAINTED with the MANUFACTURE of the BEST and FINEST QUALITIES of MALLEABLE IRON in all its details, and to SUPERINTEND the ERECTION, and UNDERTAKE the MANAGEMENT of IRON WORKS. None need apply but those who by experience are thoroughly competent to fulfil the duties of the situation.—Apply by letter to "H. H.," 12, Stock Orchard Villas, Caledonian-road, Holloway, N.

WANTED, a COLLIERY VIEWER, experienced in mining
operations, and COMPETENT to TAKE the MANAGEMENT of the UNDERGROUND DEPARTMENT of a COLLIERY, MAY HEAR of a VACANCY on application to "C. Z.," at the office of the Mining Journal, 26, Fleet-street, London, E.C., stating salary required. Applicants must give their real name and address, and none need apply whose antecedents will not bear the strictest investigation.

ROBERT MUSHET'S ORE BLOOM STEEL, COMBINING
ALL THE EXCELLENCIES OF CAST AND SHEAR STEEL, WITHOUT ANY OF THEIR DEFECTS. For all purposes to which steel can be applied, it is TWICE as DURABLE as the BEST SHEFFIELD CAST-STEEL at 84s. per cwt., and it requires no caution in tempering. Price, drawn to sizes, 70s. per cwt.—Apply to ROBERT MUSHET and Co., Coleford, near Gloucester.

CHARCOAL PIG-IRON.—THE EAST INDIA IRON
COMPANY, MAKERS and IMPORTERS of PURE CHARCOAL PIG-IRON, from their works in the Madras Presidency, DESIRE to RECOMMEND it to the ATTENTION of ENGINEERS, STEEL MANUFACTURERS, and RAILWAY TYRE and AXLE MAKERS, as well as for every description of MALLEABLE IRON and FOUNDRY WORK, requiring SUPERIOR STRENGTH and QUALITY.—For price, &c., address the secretary, Mr. E. J. BUNCESS, at the company's offices, 8, Austinfriars, London, E.C.

THE MIDLAND IRON COMPANY, ROTHERHAM, YORK-
SHIRE, MANUFACTURERS of RAILWAY TYRES and AXLES for LOCOMOTIVE ENGINES, CARRIAGE and WAGON WHEELS. From the tests to which this iron has been submitted by engineers and railway companies during several years, its superior quality has been generally acknowledged, and can be unhesitatingly affirmed.

NICKEL AND COBALT REFINING, and GERMAN SILVER
WORKS, 16, OZZELL STREET NORTH, BIRMINGHAM.

STEPHEN BARKEE begs to inform the Trade that he has the following articles for sale:—
REFINED METALLIC NICKEL. OXIDE OF COBALT. [WIRE, &c.]
REFINED METALLIC BISMUTH. GERMAN SILVER—IN INGOTS, SHEET
NICKEL AND COBALT ORES PURCHASED.

MR. MURCHISON'S REVIEW OF BRITISH MINING
FOR THE QUARTER ENDING 30th SEPTEMBER IS NOW READY, price One Shilling, at 117, Bishopsgate-street Within.

TOLVADEN MINE.—MR. MURCHISON'S QUARTERLY
REVIEW, just published, CONTAINS a FULL REPORT on this MINE, Capt. CHARLES THOMAS, of Dolcoath.

Price One Shilling. 117, Bishopsgate-street Within, E.C.

Original Correspondence.

COAL MINE INSPECTION.

SIR,—We are not surprised to see the strong articles in the *Mining Journal* on the subject of Coal Mine Inspection; every day brings us overwhelming evidence that the working of the Act has proved almost a complete failure. The ever-recurring explosions, with the mangled bodies of the victims; the despairing cries of drowning wretches who perish miserably in inundated pits; cry aloud for enquiry as to the cause of the almost utter failure in the working of a wise and good Act of Parliament. It is impossible that it can be a pleasant duty for a journalist to publish such an article as that alluded to; but it is, we think, the duty of all in any way connected with, or interested in, coal mining, and on all men possessed of a spark of philanthropy or humanity, to exert themselves to discover, if possible, the cause of such an awful state of things; and also discover, if possible, some remedy. It is with this view we send you these remarks; and we shall, with your permission, attempt to throw out some suggestions that may be of use.

First, then, we would remark that we think it is generally admitted that all collieries, without exception, ought to be inspected at least twice a year. Well; we have, then, a number of Government Inspectors, who enjoy ample salaries—about 600*l.* per annum, we presume—and they have each a certain district to inspect, containing in round numbers 300 collieries. Very well. Do they actually inspect those collieries? "Oh, no!" We are told every day they cannot do that, there are too many places. What, then, do they actually perform? Any reasonable man would fancy that they would inspect as many collieries as they possibly could per annum. But this they do not attempt—at least, those that we are acquainted with do not. How they really do spend their time we cannot possibly make out—all we do know is, that they attend at a colliery after an accident has occurred. Is this, then, their sole duty? Certainly not. And we would remark, that surely this abominable state of things will not be allowed to continue much longer. Why do not they inspect four collieries per week, at least? If Government Inspectors are to be of any service in carrying out the intention of the Act, this they must do. How many of the present men occupying those offices can or will do it? We are acquainted with some of them, and they are clever men, but it is quite absurd to suppose that they will descend "nasty, beastly holes" two, three, or four times per week. They will not do it; and some of them cannot do it; the thing is physically impossible, as some of them are too old to perform such arduous duties, and some are much too fat. They are, in fact, head-viewers, or managers, and they have mistaken their vocation altogether when they became Government Inspectors. But the large salary attached to the office has done this. Is it really necessary that they should have very high scientific attainments? We venture to suggest that good and efficient men could be got for 300*l.* per annum, who would actually inspect the collieries, which alone can be of real service. By this arrangement double the number of men could be had for the same outlay as at present. Let a system of competitive examinations by competent Government officers be established, and we doubt not that men will be found who will pass muster at even less than 300*l.*, who will personally inspect 150 collieries per annum, twice. This is simple enough. But we would ask again, why do not the present Inspectors engage an assistant? Can they not afford to give 150*l.* a year out of their large salaries to some poor fellow to assist them to get through their neglected duties.

In conclusion, we would remark that one Inspector-in-Chief, with a salary equal to the present officials, with twice the number of present Inspectors under him at 300*l.* per annum, would, we submit, effect a vast improvement in the present system. Or, another idea we will mention—Why not pay them according to the work done?—say, a fixed sum for each colliery inspected. We all know the necessity that exists to have collieries worked by the piece; apply the same rule to the Government Inspectors.—Dec. 20. A COLLIERY AGENT.

COAL OIL—ENGLISH AND AMERICAN COAL INTERESTS.

SIR,—It is well known that canal coal can be made to yield various chemical products of great value to the industrial world, and it appears that in America the subject is receiving even more attention than in Great Britain. An interesting letter has been addressed to the Secretary of the Ohio State Board of Agriculture, with reference to the manufacture of coal oil and other products from canal coal. The manufacture of oils for illumination and for lubricating, from coals, as commercial products, is, he remarks, of recent origin, and limited to the last five years—mainly, indeed, to the last two years; but, though yet in its infancy, enough has been learned and developed to place it in a high rank amongst the valuable gratifications prepared in Nature's great laboratory for our wants and comfort. By common processes, canal coal yields benzole, a light and highly inflammable substance, used largely in the arts, and in the portable processes of manufacturing gas; next in order we get the burning, or illuminating oil, being a mixture of the benzole and the mucous or fatty portions of the oil; next, an oil admirably adapted for wool in the picking and carding processes, its properties tending to dissolve the grease and dirt so intermixed with all our fine wools; next, the heavy or lubricating oil for machinery, which, as it runs from the stills, is mixed with paraffine, a substance in its nature and appearance corresponding with the best sperm and white wax. These products are in varying proportions in different coals, and no general standard either of average product or the specific results could be made, the coals in the same vein frequently changing materially their quality in a few feet. Most coals yield a large quantity of strong ammoniacal water, a product of great value to agriculturists. This, with the coke, ends the chapter of products, all being available for use.

In Central Ohio there are as rich varieties of the canal coal, and as fine deposits, as exist anywhere in the world; and it is estimated that in the counties of Licking, Coshocton, Muskingum, and Perry, there is an area equal to ten square miles underlain by canal coal and shale to the average of three feet thick. This would give about 4500 tons to the acre, or 307,200,000 tons to the land alluded to, and estimating the average value at but 2*l.* per ton, it would be worth upwards of 5,000,000*l.* sterling, and, if manufactured into oil, and made to yield (as it may be) 30 gallons to the ton, it would give 9,360,000,000 gallons, which, estimated at 2*s.* 6*d.* per gallon, would be worth the enormous sum of 1,200,000,000*l.* These figures will look extravagant and visionary to most readers, and will prove a practical illusion to those who act upon them, as affecting the value of their real estate in this day and generation, except in favoured localities, where the facilities of transportation and manufacture are very good; and then it must be limited, as a few acres of good coal will last an extensive factory many years.

Many individuals and companies are engaged, or engaging, in the manufacture of the products of canal coal, and some expect the business will be overdone, and some of all the advantages it now offers as a speculation. To many this expectation will be realised, whilst to others who best understand the processes for refining and deodorising the oils, and who skillfully manage their financial matters, there is a fruitful field to harvest before them. No substance has ever been used for lubrication that more fully realises the wants of the mechanical world when properly prepared for that purpose, and it can be afforded at a much less price than any of the good oils heretofore used. For illumination there is nothing but gas that can compare with it for brilliancy; and on the score of economy it takes precedence even of gas. Messrs. Dille and Robinson were the pioneers in the business in Central Ohio, and they have struggled up against prejudices, and against the difficulties that beset a new and truly mysterious business, till they are now preparing for market weekly from 2000 to 2500 gallons of the various oils. The Great Western Coal and Oil Company, of Newark (Ohio), are just completing their works on a large scale, and will shortly be able to furnish from 3000 to 4000 gallons per week. And the Newark Coal-Oil Company are preparing to make from 1500 to 2000 gallons per week, making an aggregate for the three establishments of from 6000 or 8000 gallons per week, or of from 300,000 to 400,000 gallons per annum. This seems like a large amount, and as if it would overstock the country, yet the statistics show that Cincinnati alone manufactures more than five times that amount of kerosene annually.

The report from which the foregoing information is gleaned being that of a practical manufacturer, it may be presumed that the figures are in every way reliable; and it would certainly appear, that if in the United States the manufacture of mineral oil is deemed worthy of so much attention, the industry should be more fully developed in England than it has hitherto been; and that there is an ample field for the investment of capital in this direction, and fair prospects of a good remuneration.

In the United States the question—Are coal-oils explosive? has been

raised; but I think it must be admitted that coal-oils of ordinary purity are not explosive; it being only when they are adulterated with alcohol that the slightest danger is to be apprehended.

ONE WHO CONTRIBUTES IN THE HOPE OF ACQUIRING.
Manchester, Dec. 22.

THE COPPER TRADE—THE SMELTERS.

SIR,—The old cry of copper monopolists is, it seems, never destined to be red-taped. It matters not how many new smelting companies, totally distinct from the old-established ones, may enter the market to purchase ore and sell copper, and that those new companies succeed, despite all the opposition of the associated companies in securing every week, both in Cornwall and at Swansea, so large a share of the ore offered for sale as materially to affect the standard of purchasing. Notwithstanding all this (and the existence of this state of things cannot be denied), the Copper Trade continues to be a close monopoly. Wonderful anomaly! But this is far from being all. There are other circumstances connected with the manufacturing of this metal which make the anomaly still more incomprehensible. The process followed by the old smelters in the reduction of copper ores is one discovered by our forefathers some hundred years ago, and is the most expensive, the most round-about way that could possibly be hit upon; in fact, routine here reigns supreme. All the old gradations of smelting pass unquestioned, and are put into practice at the present day, without our knowing the reason why, merely because our fathers and grandfathers found them to answer, and because copper smelters, being a class of men differently constituted to all the other men of this age of progress, are opposed to any innovation whatever; and this system continues in the face of a thousand new and unrivalled methods, patented by non-smelters and by young smelters, who place their services and patents at the disposal of these obstinate men.

Many of your readers, unacquainted with the facts of the case, may be disposed to question the truth of these statements. If any such person exists, let me refer him to Dr. Hyde Clarke's paper on Smelting, and especially to the discussion on it, given in your *Journal* of Dec. 11. It is there shown that Mr. Charles Low has invented a process, by means of which copper can be extracted from its ore in 36 hours instead of 10 days, the time occupied by the method followed at the old works. By this new plan (I am quoting from Mr. Low's speech) copper was produced at a cost 50 per cent. less than that incurred by the ordinary existing way; and, moreover, the copper made was so superior to that sent into market by other smelters, that it secured a price of from 2*l.* to 3*l.* per ton above the finest quality manufactured by them. Now, the objection which is generally urged, and urged with truth, against most new inventions, is that they have been found out and proved in the laboratory—that they look very well on paper, and may be quite correct in theory, and successful on the small scale, but when they are attempted to be put in practice on the large they nearly always turn out complete failures. In the case we have before us this objection is effectually met. Mr. Low, with the good fortune to be envied by brother inventors, and deserving better success, found friends with capital sufficient, when joined to his own, to establish a works to carry out his views. Many thousands of tons of copper were produced at a cost of working, he it remembered, 50 per cent. less than any other house was capable of producing it, and sold at a price of 3*l.* per ton above the highest price secured by other companies. The profits (says Mr. Low) made by the old smelters amount to 40*l.* per ton of copper; calculate, then, upon this basis the profits of the new company. What visions of dividends rise up before us! Ah! cries the unfortunate speculator in similar schemes, there lies the profit. When you enable us to pocket dividends we will pass over and leave to you the details, the working out of the plan. Listening to Mr. Low's description, we all feel what a loss we have experienced in not having been so fortunate as to secure a share, however small, in so profitable an undertaking—an undertaking established on so solid a foundation that competition and monopoly may do their worst; risk of failure there is none.

Let us now come to the facts of the case—to the results as given by Mr. Low. "Our success brought upon us the opposition of the monopolists. The price of copper was lowered to an unprecedented extent, and the price of ores raised, that it was quite impossible for us to continue our operations except at a loss; and in order to prevent our losing the whole of our capital in a useless competition with those who could afford, for the time, to lose twenty times the amount, and afterwards make the miner pay for it, we discontinued operations, but not until the question had been fully proved, and the success of the process completely established."

What an unlooked-for and lamentable result! Notwithstanding all their advantages, notwithstanding the very important advantage ground they possessed over the old companies in any competition, the old smelters succeeded at last, by an enormous sacrifice of capital, in driving Mr. Low from the market. Here we have, at all events, a period when copper smelters made no profit, and not only made no profit, but suffered a direct loss of from 5*l.* to 10*l.* on every ton of copper manufactured. Say, the make of each of the old companies averaged 60 tons per week, the loss suffered by each company amounted to, at the least, 360*l.* per week, or 18,720*l.* a year. That we are correct in this calculation your readers may see from what Mr. Low has stated—Copper made by his process reached a price 3*l.* per ton above all other copper. This, on 60 tons, will cause a loss to the old works in competing with Mr. Low of 180*l.* per week, and leave the new company (if the associated smelters stopped at this mark) a profit arising from the reduced cost of working—i.e., 50 per cent.—say, 3*l.* per ton of copper, or, on 60 tons, 180*l.* per week; surely quite enough to satisfy the new adventurers until they had tired the old smelters out; which would not take a very long time, when we consider the sacrifices they made in order to cut out one company (still Mr. Low's figures), amounted to 40*l.* per ton of copper, being their annual profit, and 6*l.* actual loss; altogether on 60 tons (a low make) 2760*l.* per week, or 143,520*l.* per year per company.

Now, the Penclawd (Mr. Low's) Company was in existence for about three years—from 1849 to 1851. For this term, if the old smelters continued the game, their loss would amount to 430,560*l.* per company, a sum quite sufficient to make them desist from their opposition; and during this time, although the Patent Company made no profits, they, at all events, suffered no loss other than the interest on capital. Let us now, however, refer to the *Mining Journal* for our data, and see the difference during the period 1849 to 1851 inclusive (I am now sure that this is the exact period of the existence of the Penclawd Works; I find, however, that putting the data twelve months earlier or later, will make very little change in the figures which follow), between the price given by smelters for ore copper and that received for cake copper. We shall here see upon what ground Mr. Low stands when he states that the lowering of the price of copper to an unprecedented extent, and the raising of the price of ore was the cause of the failure of his scheme. I take the first sale in December.

Year.	Ore copper.	Cake copper.	Margin for smelting and other expenses.
1849	£71 0 0	£84 0 0	£13 0 0
1850	65 17 0	84 0 0	18 3 0
1851	69 1 0	88 10 0	19 9 0
1852	99 15 0	102 10 0	11 15 0

The second sale in December for those years shows a difference equally great, and the average difference between ore copper and cake copper for the month of November in the years 1849, 1850, 1851, and 1852, amounts to 16*l.* 5*s.* per ton. The difference in the preceding months of September and October is nearly the same. Add to this margin for expenses (which is much above that of the present time) the 50 per cent. saved in the cost of manufacturing, and the 3*l.* per ton extra price received, and we see how reckless a statement has been made to explain the downfall of Low's Patent Copper Company.

We now refer for a short time to the charge against smelters, that the plan of smelting followed by them is one invented by their forefathers, and which, though very capable of improvement, has up to the present time been scarcely, if at all, changed. This is true in its main points, and why is it so? I believe I may safely say that in no trade have so many inventions for improvements been patented, and in no trade have so many failures been experienced when those inventions have been applied to practice. We have Napier's patents, Trueman's patents, Parke's patents. We have a company established in Cornwall for reducing copper ore at a mere nominal cost by electricity, and we have Mr. Low's patent. We all know what have been the results. Some of those patents have been abandoned altogether for the old plan, some are still partially worked, and some have never been put into real practice. None of them produced by its success any change in either the price of ore or of copper; in fact, all the companies in England which have been started to work out new schemes are either wound-up, or, if in existence, worked upon the old plan. You say the monopoly possessed by the associated com-

panies has been the cause of all this. If this be true, the old companies must during the many years some new works existed have lived not by the profits, but by the enormous losses they suffered; or, on the other hand, from their longer experience in the trade, they were enabled to send copper into the market at a less cost than the new-comers could. This is a hard conclusion to come to, yet it is the only one. If it is not, let those who fix smelters' profits at so high a rate as 40*l.* per ton come forward, and show how, with so great a margin, and with improved plans of working, by which they saved nearly the whole of the manufacturing expenses incurred by the old companies; let them come forward and prove how, with these advantages, they could not during the two or three years of their existence compete with the old houses. Sneering at others in a fortunate position is not the way to prove one's superiority; in this practical age we require something more tangible.

Are we then to take it for granted that copper smelting is incapable of improvement? By no means; but all parties who make the attempt will do well to approach the subject studiously, and not as most new examiners do—advance to an easy conquest, to reform a long-neglected branch of our commerce, glad that the task has fallen to their lot. That man who fancies all his predecessors in any art were blind, that they followed certain lines of action without any reason whatever for so doing, is pretty sure to find out ere long that he has himself something to learn.

In copper smelting, at the first examination, we are very apt to be deceived, and it is only after long practice that we see the rationale of the mode of working. We must consider, in explanation of the long process pursued, that in extracting copper from its ore it is not extracted, as most other metals, from ore containing little else but copper, but that copper has to be reduced from an ore of copper, tin, arsenic, iron, &c., and that all these metals have to be separated from it.

Copper smelters are accused of being opposed to all innovations; this is correct, if by it is meant that they have an objection to see their works upset from one end to another to give place to a new plan of working, of the success of which they are extremely doubtful; but if by it is meant that they are unwilling to give any scheme of improvement a trial, nothing can be farther from the truth, as hundreds of trials, made at a great outlay, might be enumerated. Partial success has attended some of those experiments, but nothing has been attained which materially altered the previous course of working. Mr. Hussey Vivian refers to this in his *Lecture on Metals*, delivered last week at the Royal Institution in this town. He says, "Notwithstanding innumerable trials I have found no plan which will effectually replace the old one; and his want of success has not arisen from the non-employment of talent, both theoretical and practical. Copper ore buying, and copper smelting, have a publicity not to be found in any other trade, and the magnitude of the interest involved brings a host of critics forward, who act as critics having a certain end in view always do—ignore all the extenuating circumstances in the smelters' favour, and push forward all the blackening evidence they can find. If a depression in the trade takes place, and a nearly total non-sale of copper ensues, smelters cannot reduce the price without being accused of ulterior views; if a change in the other direction be made, increased demand cannot be the cause. If the standard of ore is reduced, copper monopolists are making enormous profits at the poor Cornish miners' expense; and if from great competition in the market the price paid for ore is very high compared with the price of copper, the cry comes from new smelters that the sole object is to cut them out from the trade. In fact, steer how they will, act in the miner's favour or against him, the unfortunate body of smelters are always trying to overreach some class, to grapple by unfair means more than their due. For the last few months the standard of ore purchasing has been high beyond precedent, and profits, instead of being 40*l.* per ton of copper, will not reach a sum sufficient to pay a low interest on the capital embarked. People, after all, may be reasoning on false premises. The emoluments arising from smelting may, now there are so many in the trade, be very far from the fabulous sums set down by outsiders. We hear a great deal of the fortunes made by the heads of the large houses, and this is adduced as a proof of the profits made; but if we compare those fortunes with those realised by other capitalists—bankers, iron smelters, and others—we find that they are not so outrageously large.

Mr. Michael Williams died possessed, it is said, of above 1,000,000*l.*; but it must be remembered that he was fortunate not only in his copper smelting speculations, but in a hundred other things, mining included. Now, to what are we to ascribe the non-success of many of the adventurers in smelting? The chief cause is very lucidly set forth in an article in your last week's *Journal*; and another cause lies undoubtedly in the reckless application on the large scale of new methods. The loss arising from this is often very enormous. The cost of constructing a copper works is great, and if the works be built to carry out a patent, and when this turns out a failure, is pulled down for a modified arrangement, and again and again for re-arrangements, we may easily learn where the money goes. In conclusion, let us state that the unity among the old smelters is far from being so cordial as is supposed, and exists more in the imagination of mining speculators than in reality.

Swansea, Dec. 21.

THE SOUTH EUROPE MINING COMPANY.

SIR,—The report, in your last week's *Journal*, of the first meeting of this company seems to me to be generally important in two particulars—firstly, as furnishing additional evidence that the directors of mining companies are now more communicative to their shareholders than was their custom a few years back; and, secondly, as containing a true and graphic account of the mineral riches of Southern Spain and Portugal, and also clear and valuable directions as to where they are to be found by all who may wish to obtain them.

I do not intend to trouble you with an expression of my sense of the candour and magnanimity of the directors in publishing so excellent and so generally useful a report, not doubting that they have earned for themselves as well the confidence and support of their shareholders—a reward now-a-days of no ordinary importance—as also the good wishes of the mining public.

But to the immediate object of this communication—that is, a word or two about the geological condition of the country in which this company's mines are situated. The report states that, "from investigations lately made, the Rio Tinto Mine has ceased to be that isolated and exclusive mine it was until recently reputed, it being now notorious that it forms but a small part of a zone of copper ore, ranging some 36 leagues through the provinces of Huelva and Seville, and cropping out powerfully at Grandora, in Portugal." Now, Sir, so recent a discovery is a very severe censure upon Spain and Portugal, for doubtless those nations should ere this have been fully acquainted with, and should not for so long a time have neglected the enormous mineral wealth that their southern provinces contain; and, worse than all, should not, to the detriment of their own people, have allowed foreigners to enjoy the honour and wealth of developing them. But allow me to turn from censure, in order to consider the important statement, that there exists in civilized Europe a zone of copper more scores of leagues in extent! Such an avowal certainly seems more than incredible—almost fabulous; and the mineral deposit is, as a geological phenomenon, I may say without a known parallel. I have read of lodes being traced for many miles, and I freely admit that some extraordinary ones are ascertained to extend for the length of a score or two; but here we have a startling fact, new to science—the existence of a deposit of rich ore, containing 4-167 pure copper, 41-800 iron, and sulphur 49-838, extending for scores of leagues in length, and thousands of metres in width. A fact so singular and so valuable affords scientific considerations worthy of the attention of a Humboldt, and commercial intelligence which I am sure will not be neglected by the mining capitalists of this country.

This wonderful discovery, for it is nothing less, shows that there exist in the Iberian peninsula inexhaustible deposits of copper, iron, and sulphur, three natural products the most concerned in contributing to the wealth, civilization, and happiness of mankind; for, although the company's report leads to the supposition that it is proposed to produce copper alone, yet it seems to me that as an iron ore as well as a source for sulphur their deposit is equally valuable, and equally deserving their attention.

I notice with astonishment the statement of the wonderful riches of the Government Rio Tinto Mine, ninety million pounds sterling of copper in sight! But I pass it by, in order to speculate upon the causes that have led to the deposition of this enormous mineral zone. I suppose all philosophers will agree with me that the porphyry has, by volcanic agency, been upheaved through the superincumbent kilaas, and then by the simultaneous, or it may be a subsequent, action of the same volcanic agency, the cupreous deposit, whilst in an incandescent state, has been infiltrated from below into the interstices formed between the porphyry and the kilaas by the displacement of the latter during and by the upheaval of the former,

We find here no room for the recent theories of electrical currents and magnetic forces, as necessary to the formation of lodes, for in this case the deposits are the merely mechanical results of plutonic, or rather volcanic causes. If such has been Nature's *modus operandi*, and for myself I have no doubt of it, then indeed arises the suggestion so devoutly expressed by the much to be lamented Buckland, that those terrible convulsions of Nature—volcanoes, earthquakes, &c.—are, by the beneficence and love of the Divine Creator of this beautiful world, made contributory to man's happiness and welfare.

The volcanic agency in the district under consideration was not, so far as yet appears, sufficiently acute to form cratered volcanoes, but of only sufficient force to produce, and not to destroy, mineral riches of incalculable value; yet from the fact that the incandescent mass was projected to-day, as appears by the surface gossans, and must there have partly dissipated in gaseous vapour, no doubt can, I think, be entertained but that the whole district was and is truly and decidedly volcanic, and is the immediate result of volcanic agency alone. Sir, I have endeavoured to imagine the throes of Nature whilst layers of killas, thousands of feet in thickness, and hundreds of miles in length, were being rent asunder and dislocated by the upheaval of mountains of porphyry—to fancy the infiltration into the interstices of the disrupted strata of the vast masses of incandescent matter which form the above-mentioned cupreous deposits—to reflect upon the wondrous volcanic force necessary to the accomplishment of phenomena so vast and so sublime; and I believe I have thereby acquired a faint notion, yet a true one, of the once stupendous volcanic operations of Nature in the Rio Tinto district, and how by their sub-acute and, perhaps, unique nature, the mineral riches of Southern Spain and Portugal have been formed and preserved for the use and advantage of mankind.

X. Y. Z.

Temple, Dec. 20.

THE SAN FERNANDO COPPER LODES, CUBA.

SIR,—My attention has been directed to the report of the extraordinary general meeting of the San Fernando (Cuba) Copper Mining Company, recently held, and your Editorial remarks thereon, both in the *Mining Journal* of Dec. 4. I observe it stated in the directors' report that "no reliance whatever could be placed in the reports made by Prof. Ansted and Capt. Northey and Moyle;" and in the Editorial remarks my memoir read before the Geological Society is referred to in a manner which does not seem meant as complimentary either to me or to the Geological Society. I regret, therefore, you will admit a few words of explanation.

My first report on the San Fernando Mines was made in July, 1855; and before my visit Capt. Northey and Moyle had been occupied for some weeks in opening out the old works (all very shallow, but much fallen in), so as to allow me to see the ends and bottoms of the mine. Judging from the workings near the surface, from the ore ground actually in sight, and from the character of the gossans, I came to the following conclusions, expressed at the close of my report:—"1. That the mining property in question contains every usual surface indication of rich copper lodes, in which large deposits of ore are near the upper part of the lode.—2. That these indications are fully justified by various mining operations commenced in different parts of one lode.—3. That these operations have been small in extent and depth, and barely sufficient to do more than establish the value of the lode.—4. That the lode, where seen underground in the works thus carried on, is in several places remarkable for its great magnitude, and for the richness of the ore it contains."

I also in this report, as originally made to my employers, inserted the following paragraph, afterwards withdrawn at the request of one of them:—"It should not be anticipated that even under the most favourable circumstances a period of less than 18 months could elapse between the commencement of active operations on the ground and the receipt of payments for ores sold. It would, therefore, be necessary to provide for the working expenses for that period, in addition to the fixed capital invested; the latter being taken at 30,000*l.*, and the former at 10,000*l.* per month, it is clear that the sum of 50,000*l.* is the smallest money capital to be thought of. It would be advisable, in case of need, to have power to increase the capital to at least double that amount." I was informed that this opinion not being asked for in my instructions, it might be withdrawn with propriety. I was afterwards consulted but little in the arrangements made, and not at all with regard to capital, or the selection of agents and mining employees. More than a year elapsed between the date of my report and the formation of the San Fernando Company; and during this time the owners (Messrs. Arrieta) were busily employed in removing all the ores in sight, and, in fact, "picking out the eyes" of the mine. In doing so they found that the richest parts of the mine soon gave out, and terminated in a very hard veinstone, containing but faint indications of ore. Nothing was said of this at the time; and it was only when Capt. Gill was sent out that the purchasers were informed of this very different state of things from that they had a right to expect. While, therefore, the indications are such as to render it still highly probable that a steady system of working might make a great mine of this property, all chance of immediate returns is lost; and as all expenses in Cuba have been even higher since than they were in 1855, whilst the season of 1857, in which Capt. Gill was sent out with a staff of Cornish miners, was unusually fatal, it is not very extraordinary that the small capital originally raised (small at least compared with the outlay needed in copper mining in a country like Cuba) should have come to an end without a result, and without involving any discredit on those who honestly reported what they saw nearly 18 months before the purchase and transfer of the property was completed.

With regard to my memoir read before the Geological Society, I enclose a copy of it, as printed in the *Proceedings* of the Society, from which you will perceive that neither I nor the Society are committed to anything more than the past history of the mine, with a very short notice of its condition at the time of my visit. I think I may venture to leave it to those who know me to decide whether in offering such a statement I am likely to have invited facts, or coloured them, with a view to produce a false impression.

The actual information afforded was, perhaps, not without some of the history of mining. Only to say, in conclusion, that on the occasion of my recent visit to San Fernando property, in the summer of 1857, to clear up the accounts relative to the mines, I was unfortunately attacked with fever, and obliged to return to England. My constitution much shattered I have since resided in this island, and although I am now restored I am only now about to resume active employment. I twice, however, offered to come to London, to attend meetings of the San Fernando Company, but on neither occasion received a reply to my communication.

I can excuse those who have been unfortunate enough to lose money in this company for their want of courtesy towards me, and their total want of sympathy with my loss of health (not, perhaps, the least considerable privation); but I do not think I should be just to myself, or to those whose reports accompanied mine in this matter, if I did not place on record the facts of the case.—*Guernsey, Dec. 18.*

D. T. ANSTED.

ON SOME REMARKABLE MINERAL VEINS.

BY PROF. D. T. ANSTED, M.A., F.R.S., F.G.S.

ON THE SAN FERNANDO COPPER LODES, NEAR CIENFUEGOS IN CUBA.

The central part of the island of Cuba is not unknown as a mineral district, although up to the present time no great development of any lodes has been recorded. This district may be described, geologically, as consisting of granites and syenites (passing into other crystalline rocks of a porphyritic nature), partly covered with a brecciated and highly calcareous conglomerate. The crystalline rocks form the mountain-chain of Trinidad, on the south coast of Cuba, and occupy a valley beyond this range towards the north, where the bed of a river lays bare a fine surface of syenite, crossed by systems of veins of felspar, spotted occasionally with silver ore.

Beyond this valley towards the north is the range of hills containing the San Fernando lode. The hills are of moderate elevation (not generally reaching 1000 feet above the sea), somewhat scarped towards the south, and having moderate slopes towards the north. They are composed of a rock not unlike that described in my previous memoir on the Cobres mines, and widely distributed in some form or other throughout Cuba. Here also, as elsewhere, the passage from a true porphyry into a calcareous conglomerate of angular stones, is in many places so gradual as to render it almost impossible to draw the line between them. The large percentage of calcareous matter is very characteristic, and the rock often decomposes into a rich and valuable soil.

Still further to the north the conglomerate character is better defined; and at a distance both towards the north and west a compact limestone appears to overlie it. The general range of the rocks and lodes may be stated as approximately east and west with a northerly dip. There are, however, local exceptions.

In the mineral field, as at present known, there are two principal groups of lodes, of which the northern has been most examined. Both are in the same kind of rock, and they are parallel to each other, and at no great distance apart. They are very easily recognised at the surface by a strong outcrop of quartz and oxide of iron, the latter often colouring the ferruginous or bright vermillion tint. The quartz is often spongy and cellular, but sometimes compact. The width varies, occasionally reaching 50 ft.; and, although obscured by a rich tropical vegetation, there is no difficulty in tracing one of the lodes

* I observed in one place a striking instance of the intersections and heaving of a vein of felspar, and some cross-veins laid bare on the bed of a river for an area of several acres. There has been a more perfect example of its kind in any part of the world.

for upwards of a mile continuously, and at intervals towards the east for a further distance. The total breadth of mineralised ground occupied by the two groups of lodes is about 1200 yards.

There are two well-marked lodes in the northern and three in the southern group, and all appear to be cut off towards the west by a change of ground on the other side of a gorge, along which runs the stream called the Arroyo de la Berronda.

The lodes are all nearly vertical; but while the two northernmost dip a little towards the north, the others seem to underlie south. The northern lode is that on which mining operations have been chiefly carried on, and here ten pits were sunk at intervals along a distance of about 800 yards. Most of these pits went down at once to very shallow depths into deposits of rich decomposed ores of copper, through gossans consisting of iron-oxide and quartz, with occasionally a good deal of blende. The ores included blue carbonates of copper, red and black oxides, and purple and yellow sulphurets, besides decomposed carbonates, oxides, and sulphures. Of these ores, not less than 10 thousand tons were extracted and exported from Cienfuegos. It may safely be assumed that these could not have averaged less than 15 per cent., and they were probably much richer. The deepest pit was 32 fms., but the principal workings are very much shallower than this.

At the time of my visit the lode exposed in the bottom at one point was 35 feet wide, including about 5 feet of "horse" or barren ground. The hanging-wall was soft and loaded with mud, which penetrated and impoverished the upper side of the lode. Nearer the footwall the ore consisted of rich yellow sulphurets of great purity. The country and horizon of ground were of the usual contour, and of very crystalline nature. The other lode of the northern group has also been sunk upon, and one was found under similar conditions. The lodes of the southern group are similar in outcrop, but the operations hitherto carried on are too inconspicuous to justify any conclusions.

The San Fernando lodes possess considerable interest in reference to scientific mining. Their dimensions and the nature of their outcrop, the associated minerals, the calcareous nature of the enclosing country, the existence of horizons of barren country within the lodes, and the extraordinary richness of the bunches of ore near the surface, are all phenomena worthy of notice, not only in themselves, but when considered by the side of the great mineral deposit of Cobres in so many respects analogous. The distance from Cobres (as much as 550 miles) does not lessen the interest thus excited, as the relations are much more geological than topographical. As there undoubtedly exist other copper districts in the island still further west, not hitherto worked, and only known by their rich outcrops under somewhat similar circumstances, the island of Cuba, already remarkable for its mineral wealth, may be expected to preserve for some time to come its extraordinary reputation in this respect.

The distance of the San Fernando mining district from the harbour and town of Cienfuegos is about 25 English miles, and a line of railway from the town to Villa Clara crosses the country about 14 miles to the north.

THE FIRST LOCOMOTIVE—THE DREDGING MACHINE.

THE PATERNITY OF VALUABLE INVENTIONS.

SIR,—After the late very instructive little discussion on the paternity of the first locomotive, it may perhaps not be out of place here to discover other children of the same very clever mechanic. Mr. Richard Trevithick, of Hayle, in Cornwall, better known as Capt. Dick Trevithick, made, at the works of the late Henry Harvey (who was his brother-in-law), the first iron vessel, and fitted into that vessel the first dredging machine; this was made for the purpose of deepening the harbour of that port. Necessity was with Capt. Dick the incentive to invention, and in the case of the iron vessel and dredger his genius did him good service. About this time (nearly 50 years since) a dispute had arisen between two rival companies; and so determined were they to thwart each other, that when one company sent its men to clear up the sand from the bottom into carts, the other sent its men with shovels to throw it back again. It was at this time that Trevithick came to the rescue, by making an instrument which could dig and bring from the bottom the rubbish at all states of the tide, self-load the barges, &c., with the same, and laugh at men and shovels. The dredger was worked by a high-pressure steam-engine. I believe that the iron vessel, or lighter, as it was called, is still in existence. There are yet other children to claim the same parentage, who are now, and have been for many years, doing the world good service as foundlings, or the foster children of others than their true progenitor.

Plymouth, Dec. 16.

J. ANTHONY.

THE SHIPS OF THE ROYAL NAVY.

SIR,—I have just finished reading Mr. E. J. Reed's lengthened document on Naval Architecture, read at the Society of Arts, and I think I shall be doing full justice to that gentleman if I say that there is a great deal of useful information in it, but very little new. He appears to be unjustifiably courteous to the Surveyor of the Navy, and many of the officials in the dockyards. However, I should have passed over these remarks had he not drawn into his entanglements the important improvements in boiler plates, by Messrs. Alton and Ferrie, which are no improvements at all, and for which no valid patent can be obtained; therefore, how Mr. Reed arrives at the conclusion that "the full value of this invention it would not be easy to state," I am at a loss to know.

Tapered iron is no novelty in rolling, but as for turning the sides up and making flanges, Messrs. Alton and Ferrie have been anticipated, and it is not mechanically efficient, from the simple fact of the metal being stretched on the outside and contracted inside. This difficulty I found out in making the metallic casks, and provided for it by rolling the metal so that the outer side of the angle is a right angle, and the inner side a quarter circle. For this I have a patent, and I am very ready to understand that the object of the arrangement is to make the angle the strongest and thickest part, whilst according to Messrs. Alton and Ferrie's idea it would be the weakest. To-morrow I shall be in Manchester with the cotton-spinners about my new boilers, and shall then trouble you to report the result of practical experiments with them.

After all the discussion in the *Mining Journal* about homogeneous metal and Mr. Mushet's ore-bloom steel, I think we should look forward to these new school metal-makers giving us an article of such a form and quality as the trade and commerce of the country require. For this I have a patent, and I am very ready to understand that the object of the arrangement is to make the angle the strongest and thickest part, whilst according to Messrs. Alton and Ferrie's idea it would be the weakest. To-morrow I shall be in Manchester with the cotton-spinners about my new boilers, and shall then trouble you to report the result of practical experiments with them.

Liverpool, Dec. 20.

JOHN CLARK, JUN.

NEGLECTED MINE SHAFTS.

SIR,—I have frequently called attention to the subject of mine shafts being left wholly unprotected when the mine has been suspended. On an excursion amongst the coal mines in the neighbourhood of Wigan, Bury, and other mining districts of Lancashire, I find these abandoned holes are surrounded, in most instances, by brick walls, or other fences, so as to render accident impossible. On enquiry of an extensive coalowner who he incurred such an expense? his reply was—if I were not to do so, and an accident happened, the relatives would prosecute me for damages, and I might probably have a whole family to maintain. I should not like to trust to a jury in such a case; beside, the idea of a life being lost would prey on my mind.

Now, surely there is a law for the unfortunate in Cornwall and Devon, or in Ireland, as well as for Lancashire. It will be well if the owners of land on which so many hundreds of yawning abysses are to be found take heed and feeling from the Lancashire coalowner, or they may have to trust to a jury. Many instances have occurred within the last seven years wherein, had damages been claimed, compensation would have been recovered. I do not think I can do the mining interest better service, or give the landowners better advice, than by keeping the subject before them; for they may rely on it the next fatal case which shall occur will be made the subject of a trial, a society having been formed for the purpose of protecting the public against such glaring evils. It will then be seen whether the strong arm of the law, backed, as it will be, by sufficient funds, will not be able to render effective that purpose it is evident humanity, and even self-interest, cannot overcome.

I, in all earnestness, beseech my fellow-countrymen to take warning in time; the tocsin has been sounded; when they come before a tribunal it will be too late. Let them remember the proper time to shut the stable-door.—*Dec. 22.*

GEORGE HEWWOOD.

PROFITABLE WORKING OF HALVANS.

SIR,—I take the liberty of addressing you on a subject which is of great importance to the mining interests of this county, and which, if its value were rightly considered, would, I think, tend to rouse the inventive genius of our mining population to see whether some great and tangible result might not ensue from the project in question being successfully entertained. It is as follows:—

Every person at all acquainted with this county (and more particularly the western portion) must have noticed the vast accumulation of refuse which is to be found at the mouth of every mine, and from which it does not seem possible to extract sufficient ore to render its working profitable.

There are, doubtless, large quantities of sulphur and other chemical matters which are rejected by the practical miner as unworthy of notice, because not the metal he seeks after; he, therefore, considers (and perhaps with truth) that it would not pay him to work them over. But we are, therefore, to consider them as unworthy of our attention at the present day, when the active energies of Englishmen especially are put forward to find a use for everything, however apparently useless. Do not let it be said that the rag gatherers (chiffonniers) of Paris and England can do and make a profit of such materials as bones, scraps of metal, and, in fact, every kind of refuse, and yet that with whole mountains (as they may fitly be termed) of mineral matter before us, and which, at present, are a serious loss to our companies, as they involve the purchase of extra land for their reception, we are not capable of turning them to any practical and profitable purpose.

I am decidedly of opinion that it requires but a stimulus to be given to this particular branch of mining economy in order to draw forth the skill of those who may thus turn their attention to the discovery of a mode by which capital may be profitably invested in this working up the halvans and killas, so to make these mountains sources of wealth to the country. I would, therefore, suggest the following plan. As the Prince of Wales derives so large a share of his property from the mines of Cornwall, let a proposal be submitted to him for a prize of £500, or £1000, one-half to be contributed by him and half by this county, "for the best and most profitable method of working the killas and halvans found at the mouths of the mines, which are now utterly useless."

My object in thus making it a joint prize is that two parties instead of one would have a direct interest in obtaining a successful result. We can readily see the vast benefits which would result from the adoption of the above or some similar plan, which might be materially improved on. I merely furnish the hint, hoping we shall soon see it put into operation. Many thousands of pounds would be circulated, additional labour be called forth, and all parties be materially benefited. The apparently refuse material

* The sulphurets seen were for the most part pale-coloured and hard, and looked poor. A sample of this kind, however, yielded on analysis 17.25 per cent. of copper and 7 ozs. of silver to the ton of ore.

† From a statement made by the late owner of the mine, I learn that during the year ending July 1, 1856, and therefore since my visit, about 480 tons of ore, averaging 17 per cent., were shipped for Swansea, and about 300 tons, supposed to be at least equally as good, were sold to the United States, the total value being £12,000*l.* During that time the average number of hands is stated to be ten men.

would be eagerly sought after, and if not actually given away, might yet be obtained at such a nominal price as to form no obstacle to the manufacturer.

Would not the Society of Arts take up the matter as well, and offer an additional prize?—*West Briton, Dec. 18.*

MURPHY.

THE DEFUNCT ANGLO-MEXICAN MINING ASSOCIATION.

SIR,—In the *Mining Journal* of April 30, 1855, will be found a long advertisement of mine with reference to the above company, which I hope all who are yet interested therein will read, especially as I recently saw, in the *Times* only, an advertisement requiring shareholders who had not applied for their final dividend to do so without delay.

That a considerable amount of unclaimed dividends yet remain in the hands of the bankers of the association, Messrs. Barclay and Co., I, I think, doubtless. The last balance-sheet which I extracted from the secretary appears in the *Mining Journal* of June 3, 1854, and from that it will be seen that the unclaimed dividends then amounted to 2163*l.*, and since then a final dividend of 2*l.* upon every 100*l.* share has been declared. Pray be kind enough to insert this letter, as many an unfortunate shareholder who may not read the *Times* advertisements may read your *Journal*, and thus become aware of the necessity for an immediate application.

The shareholders were promised that a meeting should be called, and a final balance-sheet laid before them when the final dividend was declared; but this, like many of the promises emanating from mining companies, has never been fulfilled.

Field House, Dec. 22.

CHRISTOPHER RICHARDSON.

LADY BERTHA MINE.

SIR,—I am very much surprised to see it stated in your *Journal* of last week that a letter, or report, on the above mine should have been written by me, and made use of for the purpose of depreciating the price of shares. Now, I beg to state that I was never on the mine, nor sent an agent there, neither did I ever write a letter or report relative to it. Had I done so, it would have been a straightforward, honest one; whether it had a tendency to put the price up or down would not make any difference to me, and I hope the parties fabricating such reports will be exposed. Your publishing this in your next will oblige.—*Leicester, Dec. 21.*

PETER CLYDE.

LADY BERTHA MINE.

SIR,—In my letter addressed to you last week, on the subject of the above mine, I made use of the name of Capt. P. Clyde, of South Carolina, as the agent who inspected and reported thereon. This I have since been informed is an error, and now learn that it was Capt. William Clemo, one of the agents of Devon Great Consols Mine, who wrote that extraordinary letter to some interested parties in London, for what purpose or use is best known to themselves. I have, therefore, to apologise to the former gentleman for the unintentional error, arising, no doubt, from the similarity of names, notwithstanding the difference of persons.—*Dec. 21.*

A SHAREHOLDER.

LADY BERTHA MINE.

SIR,—I shall feel obliged if you will do me the favour to insert the copy of the report sent in the next *Journal*. My reason for troubling you with a full copy of the report is, that there was an error in the extract given by a correspondent in last week's *Journal*, which may perhaps have caused some injury to the mine.

WILLIAM CLEMO.

Lady Bertha Mine, Dec. 14.—In the 41 fm. level cross-cut the lode is cut into about 8 ft., composed of capel, quartz, mudstone, iron, and stones of copper ore. The 30 fm. level is composed of capel, quartz, mudstone, iron, and stones of copper ore. The lode is small and poor, and from that point home to within 2 or 3 feet of the present end the lode is worth from 2 to 3 tons per fm. In the present end the lode is about 3 ft. wide, composed of capel, spar, mudstone, and ore, worth from 1 to 1½ ton of the latter per fathom. In the 30 fm. level the lode is 1½ ft. wide, with stones of ore. In the stop in the back of the 30 fm. level, about 20 fms. west of the engine-shaft, the lode is worth about 1½ ton of ore per fm. The lode in the winze sinking below the 20 fm. level, about 35 fms. west of the shaft, is 3 ft. wide, composed of capel, spar, and mudstone, and worth 4½ tons of ore per fm. for length of winze, 9 feet. In the 20 fm. level east the lode is about 2 ft. wide, composed of capel, quartz, mudstone, and a little copper ore. The pitches are looking very poor.—*WM. CLEMO.*

LADY BERTHA MINE.

SIR,—I see it remarked in your *Journal* by "A Shareholder" that the discrepancies between the agents who inspect must be explained by me, being the most responsible. Now, Sir, I do not see that it concerns me at all; for instance, if "A Shareholder" should get an order for his agent to inspect our mine, of course he can send Dick, Tom, or Harry, either of which may not be any judges of lodes or underground workings; how am I to answer or give an account of these discrepancies? All I can say is (as Tommy Trelease said), I shall stick to my text, and the samplings will tell the tale.

Dec. 23.

J. METHERELL.

PENGENNA—NORTH ROBERT—EAST WHEAL RUSSELL.

SIR,—Absence from home, and weighty matters of business requiring the whole of my attention, is the reason I have not replied to your numerous correspondents. I should begin with "Forester," but really such a person is not in existence under that name. As regards "W. T.," I have only to tell him that if he will leave his anonymous associates, and join better company, I will hand him printed orders to receive the Treburt dividend. Pengenna will be fully reported on shortly, and I may add, it is a free and open mine; where we court inspection, which is the proper way for parties to satisfy themselves; for seeing is believing, and this is the answer I give to all who really are, or assume to be, doubtful; indeed, perhaps there is more to see than they are prepared for. The shareholders generally have too much confidence in the manager to pay attention to such as your correspondent, whose motives I do not enquire into.

In reply to Capt. Charles Thomas, I beg to say that he was not first employed to inspect North Robert by a private individual I was misinformed. I did not for a moment intend to insinuate that he would knowingly give an erroneous report, but I still am of opinion that he was called in secondarily for a certain purpose: knowing the mine had improved, it was a good time for his previous bad report to be thrown in the shade by a better, and I think the recent report has had the desired effect.

"Committee Man" might have given his name; however, it does not matter, as my business is not with him. I was sent to examine the mine for a shareholder, when I found a letter from the secretary, forbidding the captain to allow any one to examine the mine without an order from him. Therefore things are come to a pretty pass, when masters have to ask leave of their servants.

Concerning Mr. Reynolds and East Wheal Russell, the questions I put to him were only fair ones, and only required fair answers, which would have set the matter in a clear position before the public, and been a tangible guide in purchasing; for, as it appeared in the report, parties unacquainted would suppose that immense quantities of ore had been returned from this mine. What I expected was straightforward replies, and not such as we are favoured with from this gentleman and Capt. Goldworthy; the latter has certainly explained away 1000 tons of good ore, which is a very serious loss to the company; and I must also tell him that if the 55 fm. level, which I am aware was not driven under his direction, carried deep levels, and the 66, driven principally since he has been on the mine, lost 4 fathoms, it is contrary to the rules of good mining, and I recommend him to alter his course, and discontinue driving in such a random manner, or he may again hole to the 55. In well-managed mines the miners are not allowed to run riot, and lose the backs, as they have in this mine.

To return to Mr. Reynolds, instead of stating the quantity of ore taken from the mine, he says it only held good for the height of the level, which he had before stated that all these backs had been taken away, and produced little or no ore. Really, Mr. Reynolds, should avoid committing himself in this way. This gentleman also says there is no discrepancy in his report and that of Capt. Charles Thomas, except in their valuation of the lode in one end. Now, this was the only place they could possibly differ, for the other points were comparatively unimportant; and here the difference was to such an extent, that in reason we must suppose one or the other "no judge," or when they were in this particular end their candles went out: for no two men with lighted candles could vary in their estimates to such an extent as 12*l.* and 30*l.*, with only one day's difference in the time of their visits; even if they had been working all the time, and the end had changed slightly, some little allowance might be made, but I am told no ore was taken down in the interim. As the matter now stands, the shareholders will have to watch the returns to decide which report is correct. At present I will not make any further remarks on East Russell, but am bound to return to Mr. Reynolds, and call him to account respecting the insinuations he has made regarding my presenting forged orders. Now, this is serious, and I call on him, for his own safety, to give up his author. This shows to what a length some people will go in their annoyance at being questioned concerning the accuracy of a report. I scarcely need say I have no genuine orders, and I challenge Mr. Reynolds to show where I ever called with any others. I have always a plenty for good mines, and some for valueless ones, that I can hand over to him.

I also note the remarks of one of the Camel Quarry shareholders. I am much engaged at present, but he really must very indifferently understand the person he has addressed himself to, if he thinks I am quiet by the discharge of a pop-gun. Wheal Emma party have thought fit to move again, but when I am not quite so much occupied I can refute their insinuations, and prove them in error.—*Whealton, Dec. 23.*

N. ENKOR.

WHEAL GUSKUS.

SIR,—Having read in your *Journal* of Dec. 4 a letter signed J. Berry, in reference to the affairs of this mine, and as my name has been improperly made use of, I take the liberty, through your *Journal*, of correcting that gentleman in several important points. In the first place, I beg implicitly to deny the statements in the first paragraph of Mr. Berry's letter, "that he knew nothing of the meeting having been called until he heard of it accidentally just previous to its being held; and that so far from being informed of it, he believed for a private object the secretary studiously concealed the notices of the meeting from him." And I would mention, for the satisfaction of the shareholders and the public, that I did on three different occasions previous to the meeting of Nov. 17 consult and advise with Mr. Berry in reference thereto, and a few days previous to its being held I invited him to attend, which he agreed to do, and stated that, considering the position of the company, he thought it the best course that could be adopted. This statement was made in the presence of two witnesses.

I would here mention that during the year 1857 I laid out and advanced to the mine upwards of 600*l.*, 300*l.* of which I paid to merchant creditors, and the balance to the labourers and miners on the mine; and so far from the greater portion of my claim being disallowed by the Registrar of the Stannaries Court, I most emphatically state that not one penny has been disallowed; on the contrary, after an examination of the company's accounts for the past two years, which occupied several hours daily for upwards of ten days, the Registrar certified, in the presence of two disinterested gentlemen, that after a careful examination of my accounts he saw nothing that could cast the slightest blemish upon my character. I would further add, that at a meeting of the shareholders, held in December last, at which Mr. Berry was present, a resolution was drawn up by him, and passed by the shareholders, "That interest at the rate of 8 per cent. per annum be allowed on his respective advances." Surely Mr. Berry must know that such a resolution would convince any disinterested person that my claim is a *bona fide* one, and not, as he states, "the alleged claim, of which the greater part has been disallowed."

In the third paragraph of his letter he writes—"I beg also to state that I happen to represent the largest creditors of the company." Surely Mr. Berry must be labouring under some extraordinary delusion when he commits to print such a statement; and I positively assert that he does not represent the largest creditors of the company. Mr. Chilcott, of Truro, is the representative of the largest creditor; Messrs. Hodges and Chilcott, of Truro, and Messrs. Carlson and Paul, of the same town, the third largest creditor. Neither is he the representative of any one of the numerous creditors of the company. I have every reason to know that he never has been consulted, neither has he acted in any way for a creditor in the proof of claims before the Stannaries Court.

I will not dwell on this further than to remark that Mr. Berry is fully aware of the position of the company; that he knows 2074 shares have been relinquished and forfeited for non-payment of calls; that he advised the acceptance of a relinquishment of 1870 shares; and that a large majority of the remaining shares are held by shareholders who cannot pay, and in many instances by parties whose present addresses cannot be found.

been) biased by prejudice, whilst they cannot be by interest, so long as he adheres to the determination to follow the business of a broker of shares, and never to depart from it to become either a dealer or a shareholder.—SALUS OMNI.

From Mr. EDWARD COOKE:—Notwithstanding the dulness usually witnessed at this season of the year, divided and good progressive mines have been in active demand during the week. The rise in the price of copper, which is generally followed by an advance in other metals, has given a stimulus to the market, in addition to which great improvements have taken place in several of our most promising mines—as, for instance, East Bassot, Wheel Charlotte, United Mines, Condurrow, Lady Bertha, East Russell, Brynall. On the 4th inst. we find these mines representing market value in the aggregate about £26,000; at the present period the aggregate value of the same is about £85,000, thus showing the large profits to be obtained in a short time by a judicious outlay in several mines of established reputation. It would be presumptuous to suppose that all should turn out prizes, but the object of these remarks is intended to show that one mine cutting generally repays the outlay on many others. The writer's experience has convinced him that heavy losses in mines can be avoided by a proper selection and a reasonable amount of attention by a broker to the interests of his clients. There are periods and phases in this, as well as in other markets, when mining shares should be bought or sold; and, whether for investment or speculation, operations of this kind are as legitimate as railways, or shares in steam companies, &c., and certainly not attended with their heavy liabilities to compensate for which the most flourishing of them pay a very small percentage, when compared with South Carolina, Devon Great Consols, Wheal Ann, South Frances, Minera, Phoenix, and many other mines, which are paying regular dividends at the rate of 12½ to 20 per cent. The only risk attending the most unprosperous British mine is that of the original outlay, together with a proportionate amount of the actual working costs on the interest held. By the payment of the latter, shares in cost-book mines can at any time be relinquished. We are only supposing an extreme case, which, with ordinary care, can always be avoided. It is the fact of this, where really no reason for it exists, that, no doubt, deters many from embarking in mining adventures. Another reason (and it too frequently occurs), that parties who have lost their money by speculating recklessly in other concerns, attribute their misfortunes to adventuring in British mines, when, from enquiry, it has been found that their names were never known to any broker or dealer on the market. These circumstances are one we verily believe have had the effect of bringing into disrepute one of the most important branches of the nation's wealth. But, with all this, mines are worked, and, in numerous instances, with enormous profit to the parties engaged in it. There are many now on the verge of paying dividends that can scarcely fail to be productive of large profits to those who are disposed to give this class of security a fair trial by an outlay of their capital. Everything seems favourable for a prosperous year in 1859, and no doubt, there will be a rush for investments of all kinds at its commencement. We would, therefore, suggest an outlay now, and not wait until everyone wants to buy. With those few remarks on a subject which the writer feels himself quite inadequate to do full justice to, he wishes his friends a more prosperous new year in the coming one than the present has been to all those who have been engaged in commercial and mining pursuits.

SUCCESSFUL MINING OPERATIONS IN FRANCE.

BANQUET GIVEN TO MR. RICHARD TAYLOR, AT PONTGAUD.

Mining has its heroes. It is not a mere brilliant exploit however performed, nor any success however great obtained by a happy concurrence of circumstances, that makes the hero of the mines. It is not the empiric who treats nature as one great hap-hazard, and depends for success more on luck than on the intelligent use of means, on whom miners bestow such an honour. He is the hero of miners who loves mining, and befriends it; who sees it from a higher than ordinary stand-point; who comprehends its position and destiny; who elevates it in the rank of industrial enterprise, and among the economical sciences; who extends its power and strengthens its influence.

The Messrs. TAYLOR, under whichever of these aspects they be viewed, are incontestably the men of the mines. They have contributed, and do contribute, as much, or perhaps more, to the real advancement of mining, and are more generally looked up to as miners, than any three gentlemen in the world. They are distinguished for their bold and comprehensive views of mining; for its service they lay all the sciences under contribution, and they can lay claim to numerous most important inventions, of which mining will ever feel the benefit. For extending its influence they are among the foremost. The transforming power of their hand is known, and their authority acknowledged in almost every part of the habitable globe. Wherever they establish themselves mining, before imperfectly understood, receives almost another form of existence. Their perseverance is indomitable, and their self-possession and resolute determination in time of difficulty, those who have been with them at such times can best tell. Paragon of masters, and the best of employers, the subject of this banquet lives in the affections of his agents, and is blessed by the thousands he employs.

It will no doubt gratify our brother miners in England, and the friends and acquaintance of Mr. Richard Taylor, to hear of the compliment paid him by our generous allies the French at Pontgaud, joined by the English of that place. A few days ago a desire was manifested on the part of the French to give some proof of their esteem for this gentleman; this desire, which was quite spontaneous, was no sooner made known than the English attached to the mines eagerly joined in it, and they all agreed to have a banquet, to which they would invite him. The committee formed to manage the dinner decided on the 11th as the day for the occasion.

The interior of the building chosen for the day was tastefully decorated with evergreens and flowers, and with various appropriate inscriptions, &c. The exterior was illuminated, and over the entrance, guarded by two gendarmes in full dress, were floating the flags of England and France, and the flag of the town and of the mines. Over these flags was a large, cleverly-wrought transparent tableau, bearing symbolic devices and inscriptions. About six o'clock the booming of cannon announced the arrival of the guest of the evening. We were seated down to a sumptuously spread table, such as the French can spread. To describe the banquet would puzzle the cleverest student of gastronomy.

M. LEGAY, a land-proprietor of the place, said—I am happy and proud of the honour you do me in calling upon me to speak first at this meeting. It is to you, Mr. Taylor, that the population of the canton of Pontgaud, and of the bordering cantons, owe the new certain development of mineral riches contained in our mountains. Your vast acquaintance with the science of mining, acquired by deep study; the high post you have occupied, though yet young, in the direction of different important establishments entrusted to you, where your ability has displayed itself, and merited the confidence you now reap the fruits of: these are to us guarantees of the future prosperity of the great mining establishment founded at Pontgaud, and of which the wise administration, directed by M. Bontoux, ensures hereafter the success. You see with what happiness the mass of our population venerate you, and show their gratitude to you for your solicitude to provide them with work, and to increase their well-being. Your compatriots, whose amenity and courtesy have gained the esteem and affection of the inhabitants of this town—they gather around you. The *employés*, so zealous to fulfil their duties, and so devoted to the interest of the undertaking, rejoice in welcoming you. In fine, Sir, the authorities, administrative and judicial, and the functionaries and principal inhabitants of this town and canton, have spontaneously united to tender you their feelings of affection and gratitude for the benefits the mines scatter in the country, and to express their eagerness to join the general sentiment of the good which has been conferred on this neighbourhood by an enterprise to which I have cordially contributed my best exertions. I have always felt deeply that France and England, pre-eminent among all nations for their genius and their progress in the sciences and in the industrial arts, ought to walk hand in hand in the path of civilization and advancement. I, therefore, embrace with the greatest readiness the invitation which was made to me by my excellent friend, M. P. Bontoux de Schaezler, to unite with him and his friends to form a Société Anglo-Française for working these mines, in which he had been himself so long engaged. My father and brother, with whom I share the direction of all our great mining undertakings, joined heartily in this enterprise, offered to the company a staff of skilful and experienced agents, chosen from our establishments in Cornwall and Wales, and with the help of many of our friends in England have contributed a considerable portion of the capital required. You know, Gentlemen, how great and various have been the difficulties with which we have had to contend since the commencement of our operations, but they have never shaken my confidence in the future success and prosperity of our mines. If the plan of operations which we have suggested, and the mechanical means which we have adopted, have deserved the flattering approbation which has now been expressed to me, I am happy to acknowledge that, without the skilful and the indefatigable assistance which I have received from all my fellow-labourers, I should not have been able to overcome so many obstacles. Gentlemen, in the times of our greatest difficulties the honourable vice-president of the company, M. Bontoux, has often encouraged me with the words so truly expressive of his determination and energy, "*Il faut résister à nos réactions*." The present condition of the mines presents a clear proof that all the great natural difficulties are already overcome; the prosperous aspect of the mines gives a guarantee of future riches, and the assistance and co-operation of so many of you, Gentlemen, who by your influence can do much for the success of this enterprise, which I shall most heartily rejoice, will be the idea of having been able to contribute to the well-being of this country, to which I have become so attached, and the conviction that such an example will give an impulse to mining enterprise which will be felt throughout France. Permit me, Gentlemen, before I resume my seat, to propose that we shall drink to the health of the Mayor of Pontgaud, and convey to him the impression of my satisfaction at his having joined in the compliment which you have paid me.

M. PHEL (President of the Committee) proposed to drink to the prosperity of the Mines of Pontgaud, and gave an interesting account of the rise and development of these mines; to which M. P. BONTOUX DE SCHAEZLER responded in his usual eloquent and animated manner, making grateful reference to the clergy, magistrates, and other authorities of the town.

M. CLAIR: "To the health of the English Engineers." Of these clever, persevering, and indefatigable men, who with praiseworthy confidence have brought over from their native land—some their capital and their genius, others their intelligence and manual skill—all their hearts and souls—unreservedly devoted to the working out of an enterprise of which the success is so earnest a question for us all. Thanks to them, Gentlemen, The metalliferous riches which surround us, long unknown, unproductive, or untractable, are now brought to yield, and future success is assured.

Capt. JAMES RICKARD thanked M. Clair and the company for the honour they had done the English engineers, &c., and said—Gentlemen, if the individual who works for the well-being of his fellow-men is a philanthropist, the Messrs. Taylor may be ranked among the first. Sixty years ago Mr. John Taylor, sen., took the manage-

ment of a mine in Devonshire, called Wheal Friendship, when his talents, integrity, and perseverance showed him to the public as among the first of the engineers of the time. His renown soon opened to him a great field of action, and being blessed with two sons like himself, he soon extended his influence far and wide, and gave employment to thousands of families. The labours of these gentlemen have not been confined to England alone; they have taken for their field the entire world. As to their success, I think I can prove that the mines under their direction in Cornwall and Devon alone have given upwards of 2,000,000. to the adventurers. Captain Rickard also justly remarked that, did Mr. Taylor want protection for his person or property, he could draw forces from more countries than most of the potentates of Europe, and certainly he would not lack captains to head them.

M. N. BONTOUX: "To the Anglo-French Alliance."—To the union of those two great people, whose destinies are so intimately connected, whose fortunes are so alike, that only the most perfect entente can serve as a base for their mutual prosperity. That bond of union, ratified some months since in that admirable seaport, which, far from being a permanent menace to England, is another guarantee for the maintenance and stability of peaceful relations between these two great nations, which are incontestably at the head of modern civilisation; this compact I say, Gentlemen, is a high manifestation of the Divine will. A noble and magnificent spectacle was that of two fleets moored with the anchor of the alliance, of those heroes of battle-fields and of the sea, become guardians of peace, of those two sovereigns giving each other the hand, and saying to the entire world that from allies they could never become enemies. May God keep us from that calamity, and if, in the impetuous ways of His providence, it be written that we must yet meet together arms in hand, may it be as soldiers under the same banners of glory, bravery, and heroism. The 19th century has shown what France and England together can do. May they, then, become more and more intimate and united, and may peace and good-will, harmony, tend to the good of the entire world, to the regeneration and consolidation of universal progress. Gentlemen, for us who met at this banquet, are come to render a tribute of sympathy and of gratitude to the *homme d'état*, whose name is in our hearts as upon our lips, for us, I say, the fruits of the alliance are a very precious pledge. The future of industrial enterprise—that mainspring of public prosperity—is no longer a doubt amongst us—it is a certainty, as much as one may dare say so. Once tottering, languishing, dying out little by little (allow me the expression), like a lamp dies out for want of oil, industrial enterprise is risen again—firm, vigorous, confident in itself, and advancing towards success with a sure step, and will reach it under the *Egis* of the alliance. United in our wishes for its duration—*Vive la France! Vive l'Angleterre!*

Capt. THOMAS RICKARD: Gentlemen, if I had a tongue as eloquent as I feel my heart is just now, I might respond in a becoming manner to the toast so eloquently proposed by Mr. N. Bontoux, and so cordially drunk by you all. Those of the French and English who know how to appreciate the great boon of Providence, the union between the two great nations, are mutually proud of it. And truly it would on the part of the English too much belie their feelings not to seize every opportunity to show how pleasing to them is the exchange of friendly feelings between their beloved country and Queen and their great neighbours. How strong or how weak the sympathetic thread is that stretches from the Pyrenees to St. James's, I am not sufficiently a politician to tell you, Gentlemen. But it seems to me that the alliance that was only strengthened by that long and terrible trial of the Crimea; that remains intact after the dangers of the *attentat* and of the pamphlet war, and still remains firm, may with the greatest propriety be called sincere and faithful. But there is one thing that touches us still more closely—is the alliance sincere at Pontgaud? We have the proof of its sincerity in the banquet of to-day, where French and English eagerly meet to *fête* an English gentleman and engineer. And can we need for another proof a better one than the five years' residence of from sixty to eighty English in the town of Pontgaud, during the which of our citizens has not *unanimously* resigned. The tricolor, the union jack forming one standard. The French and English united, we have the greatest guarantee for the peace of the world. The French and English of Pontgaud, the town and the mines united, we have the greatest guarantee for the prosperity of our town and our mines. Yes, Gentlemen, united in heart and in effort we shall triumph over all our difficulties, and success is certain to us.

M. DUCHEZ: Gentlemen, not long ago, upon a shore far from this place, manoeuvred two armies—one English and the other French; those armies were called to lay siege to a town of a hundred forts—the proud Sebastopol, covered by the numerous battalions of the Russian empire, under the command of able chiefs. Our armies, too, had at their head chiefs of ability, and, above all, of valour. The two nations produce none of any other kind. But none of them had yet been placed in one of those important positions which reveals those privileged men to whose care destiny is pleased to chain victory. Notwithstanding the bulwark of Muscovite honour, the redoubtable Sebastopol, is fallen. Gentlemen—the members of this meeting, for the most part, at least, in one way or another, are under divers grades, and in armies of different natures—the soldiers of our industry; those soldiers are all English or French; their army recruited from among the brave fellows of the mountains of Auvergne, have manoeuvred for the last five years in order to bring to good issue the siege of the Pontgaud Mines. Are they, then, impregnated with the spirit of the siege? I forget myself, but that is not the question. I have not the best general at their head a general who has come off victor in twenty battles? One of those men whom judicious England ranks among the heroes of her industry. Is it not true, our brave Capt. Rickard, that, inspired by Mr. Taylor, you will bring us one day into the heart of the stronghold, whatever may be the precautions that Nature has taken to make it, that he has even buried it a thousand feet underground? That day is not far off; believe the presentiment that animates the most obscure soldier of our army. Let us, then, close in around our general, and rally again at the cry, before which, doubt not, the last rampart that Nature has opposed to our efforts will give way—*Vive Mr. Taylor!*

Several other toasts were drunk, and the National Anthems of England and France sung, and thus it joyfully terminated.

FOREIGN MINES.

ALTEN AND QUENANGEN.—P. Wilson, Nov. 1 to 15: RAIFAS: We have now effected a communication between the slope from Monk's shaft, and the workings under the shallow adit, and now bring the stuff to surface at less expense than formerly. The lode has somewhat increased in size, and is yielding more ore than all the other workings put together. None of the deeper slopes have undergone any marked alteration, the ore being still of an inferior quality.—OUP MINE: No. 1 slope: No. 1 slope still turning out a large quantity of ore of fair quality, and there is every prospect of the present good production being kept up for some time. The winze under the slopes has lately not contained quite so much ore, but the lode is still large and kindly, and the ore, though less in bulk, is more free from mud. In the driving between No. 1 and No. 3 winzes, from Bergmeister's slope, where the lode when we began was completely barren, we have this week entered a new channel of ground, with fine stones of ore, daily increasing in size and quantity. No. 3 winze has not yet reached the lode, nor will it probably do so while the lode retains its horizontal course; the lode has evidently been able to find a considerable distance westward, till the latter begins to assume the usual inclination of the lode towards the south-west. The small lode in the cross-cut from the shallow adit has dipped below the sole of the driving, and the country remaining highly impregnated with spots and small joints of spar, mud, and copper ore, we are induced to believe that the west lode is not far ahead.—UNITED AND MICHELL'S: There is here no alteration to report: the tributaries are finding sufficient ore to increase their wages, but not at such rates as to leave much profit on the operations.—THOMAS'S: This mine continues, as it has been since its first discovery, relatively the most profitable of any in Cornwall, though the lode is small, and only a few feet wide, and, without spar. The workings are 8 fms. deep, and prosecuted under much disadvantage, the extreme hardness of the country, and the late poverty of the mines, having prevented us from carrying the shallow level up to the lode.—QUENAVIO: The main lode here continues equally productive as before, but the severity of the weather prevents the miners working regularly.—QUENANGEN: The slopes under the 10 having now reached the same horse of ground as divided the lode in the winze, the produce is for a few weeks somewhat reduced. The lode in the winze after their junction was 3 feet wide of solid ore, and a few weeks will bring the slope down to the same level. The lode in the winze is 10 fms. deep, and the lode is 3 fms. wide, but the water, and the toughness of the ground combine to prevent us sinking more than ¾ fm. monthly.

WILDBERG.—Z. Walls, Dec. 18: The underground work is proceeding well, and our ore return for the month is likely to be equal with that of last month. The rise in the back of the lode remains in the level of the lode, and the lode is 2½ fms. wide of solid ore, and the winze coming down the same lode from the level above is worth 4 tons of silver-lead ore per lachter. The No. 1 sink, going down below the deep adit, on the Dorniergang lode, is worth 2 tons of silver-lead ore per lachter, and the slopes now at work in the back of the middle level, from the No. 1 sink to the No. 3 sink, are worth on an average 2½ tons per lachter. The No. 3 sink is now 10 lachters below the deep adit, on the course of the lode, and is worth in its present bottom 5 tons of silver-lead ore per lachter. The new pitch which we set last setting-day in the back of the deep adit, west from Michael's shaft, on the Unverhofgang lode, is looking well, and will produce at this time 2 tons of silver-lead ore per lachter.

SOUTH EUROPE MINING COMPANY.—El Cerro, Spain, Dec. 6: Yesterday we cut, in the Monte Romero Mine, a valuable vein of ore, containing a considerable quantity of native copper.

FORTUNA COMPANY.—Dec. 13: Canada Inco, West of the Engine-shaft: The 6th level, east of Addis's shaft, is worth ¾ ton per fathom; the lode is split into branches, that to the north end being the productive one. The 5th level, east of La Gloria winze, is worth ½ ton per fathom; the lode is 1 ft. 6 in. wide, composed of quartz, carbonate of lime, and lead ore. The 5th level, west of Buen Provecho, is worth ½ ton per fathom; there are large streams of water issuing from this end, and we expect shortly to drain the old workings in advance of it. In the 3d level, west of Romero's cross-cut, there is nothing new of importance.—East of the Engine-shaft: The 4th level, east of Garcia's winze, is worth ¾ ton per fathom; a kindly lode, containing quartz and carbonate of lime. The 3d level, east of Tomas winze, is worth ½ ton per fathom; the lode is 3 ft. wide, and presents a promising appearance.—Winzes: Clavel winze is worth 1 ton per fathom. O'Shea's winze is not to value at present, and is rather hard for sinking.—Shafts: Henderson's shaft is worth 1 ton per fathom. In Lowndes's shaft the water is drained down, and the sinking will be resumed to-morrow. The masons are proceeding with the sinking of Carron's shaft, and the men are engaged in putting in a pen-house at Addis's shaft.—Los Salidos: The 3d level, west of Addis's winze, is worth ½ ton per fathom; the lode is rather small. The 3d level, east of Martinez, is worth 1 ton per fathom; the lode is 6 in. wide, composed of quartz, gossan, and lead ore. The lode in the 2d level, east of Barronero's, is rather small at present, producing a little ore, but not enough for valuation.—Winzes: Esteban winze is worth ½ ton per fathom, ground rather hard.—Shafts: Morris's engine-shaft is worth 1½ ton per fathom; this shaft is down the required depth for a 4th level. Colongan's shaft is going down on the south side of the lode. The new shaft below surface was communicated to-day to the 1st level.

General Remarks: During the month of Nov. there were weighed to the smelting works 218 tons of lead ore; we estimate the raisings for Dec. at 240 tons. The surface operations are progressing with their accustomed regularity, the weather being favourable.

LINARES MINING COMPANY.—Spain, Dec. 13: Pozo Ancho Mine: South Lode, West of the Engine-shaft: The 5th, west of cross-cut, is worth ¾ ton per fathom; the lode regular, composed of quartz and lead ore. We have been driving on the cross-course in the 7th, west of Carrillo's winze, for some days, and expect in the course of a day or two more to find the lode again. The lode in the 4th, west of Warner's shaft, is worth 1 ton per fathom. The lode in the 3d, west of Cecilio's winze, is small and unproductive, but carrying a well-defined south wall.—East of Engine-shaft: The lode in the 8th, east of Quava's winze, is worth ¾ ton per fathom. The lode in the 7th, east of Guillermo's winze, is composed of spar and spots of lead ore. The 6th, east of Don Juan winze, is worth ¾ ton per fathom. The lode in the 6th, west of Fernandez winze, is small and unproductive, but carrying a well-defined south wall.—Winzes: Clavel winze is worth 1 ton per fathom. O'Shea's winze is not to value at present, and is rather hard for sinking.—Shafts: Henderson's shaft is worth 1 ton per fathom. In Lowndes's shaft the water is drained down, and the sinking will be resumed to-morrow. The masons are proceeding with the sinking of Carron's shaft, and the men are engaged in putting in a pen-house at Addis's shaft.—Los Salidos: The 3d level, west of Addis's winze, is worth ½ ton per fathom; the lode is rather small. The 3d level, east of Martinez, is worth 1 ton per fathom; the lode is 6 in. wide, composed of quartz, gossan, and lead ore. The lode in the 2d level, east of Barronero's, is rather small at present, producing a little ore, but not enough for valuation.—Winzes: Esteban winze is worth ½ ton per fathom, ground rather hard.—Shafts: Morris's engine-shaft is worth 1½ ton per fathom; this shaft is down the required depth for a 4th level. Colongan's shaft is going down on the south side of the lode. The new shaft below surface was communicated to-day to the 1st level.

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able ground continue as named in my former report. The ground in the 40, driving east on the north side, is of much the same character as last reported on, and the 1½ ft. wide, composed of fluor-spar, mullite, and stones of copper ore. In the end driving east in the same level, on the south side, or branch, it is 1 ft. wide, composed of capel, blende, and stones of ore. The increase of our sampling this time will be mostly adventures' ore. We calculate to have about 75 tons in one parcel, worth 6¢, per ton.

LACKMORE.—The 10 in the 24 continues very large, and also very soft. The stone above the back of this level and the pitches continue much the same as when I last reported. We are making good progress in rising over the 24, and shall soon reach the level above. We have not yet reached through the level where we are cross-cutting it in the adit, west of Brian's, and we are still meeting with small bits of ore in passing.

LADY BERTHA.—J. Metcalf, Dec. 22: In the 41, east and west, the 10, or part of it which we are carrying, will produce about 2 tons of ore per fathom, and still promising an improvement; the large veins are still holding out, and a large stream of water coming from the west. There has been no lot taken down in the 30 east this past week, but shall commence doing so on Monday next, and from every appearance the lot will improve; in cutting into the lot further east it is all ore and can. The same level west is producing stones of ore only, and in driving a little further we may expect a great change; this end is now about 8 fms. behind Carter's winze. The 20 in the back of the same level will still produce 1½ tons of very rich ore per fathom. Carter's winze, which is now down nearly 8 fms., will produce 12 tons of ore per fathom, and no appearance of any change. The 20 east will produce 1½ tons of ore per fathom, and the ground is very much altered for the better. Carter's pitch, in the back of the 30 east, is improved, worth full 3 tons of ore per fathom. We have now dressed for the market about 90 tons of good ore.

LELAND CONSOLS.—W. Richards: Since the last monthly report we have driven the 50 east, on the new or Wheel Killy lode, 4 fms.; the lode has still a very promising appearance, and pays for driving. We are driving the 60 east to intersect the lode in the 50; this end is also improving. We have commenced driving the 70 east, on the Gyr lode; the tin will pay for driving. In addition to the above, we are driving east on the counter lode to intersect Wheel Killy lode. We shall in a few days commence sinking the shaft below the 70, and driving the 60 west on the counter. It will take another month to drive the 60 and 70 east to intersect the lode cut in the 50. On the whole, our prospects continue to improve.

LEWIS.—H. Bishop, W. W. Martyn Dec. 21: At the skip-shaft the men are now engaged about the preparatory work for driving the 130 east and west, which will take a few days to accomplish. In the 120 the lode is disordered by floors of hard quartz, now worth 7¢, per fm. The 120, on the south side, is improving, worth about 5¢, per fathom. The 100 west, on the same lode, presents a more promising appearance. The rise over the 90, on Thomas's branch, is worth 10¢, per fm. No. 1 winze is communicated to the 120, on the main lode, and we have placed the men to stop east and west of the said winze, which is yielding some good tin work. No change to notice in any other part.

LOSTWITHIEL.—W. Tregay, Dec. 23: The lode in the adit level driving west is very much improved in appearance, composed at present of gossan, quartz, and spots of mullite, with every prospect of a further improvement as we get from 10 to 20 fms. more into the hill, passing under the ground where the yellow and black copper ore was found so close to surface, at which points the percent adit will be from 17 to 20 fathoms deep. The strata is a light clay-slate.

MERLIFY.—J. Trevelyan, Dec. 22: We have no change of consequence to report. The lode in the bottom level, west of shaft, is 3 ft. wide, much the same in appearance as when last reported on—at times producing good lumps of lead. The stone in back of the 16, on Merliffy lode, is producing good saving work. A stone in back of Brynfford lode is also yielding saving work for dressing.

MOLAND.—Thos. Bennetts, Dec. 22: The lode in the 32 west is split in two parts, with a horse of kyllas between. The south part is producing good stones of ore; in the same level east the lode is producing from 1 ton to 1½ tons of ore per fathom. A moderate stream of water flows from this end, which in my opinion is not a bad omen. In the east the lode is still poor. Now, as the 52 east will soon be under the winze sunk below this level, I think we had better remove some of the men from the slopes to resume sinking the winze. I have sent a man to Barnstable, in hopes of being able to ship our ore to-day, as no vessel could be procured before.

NEW TRELEIGH CONSOLS.—J. Prince, Dec. 23: The lode at Carr's engine-shaft has, speedily and considerably improved below the floor of quartz; we have a good course of ore, and I am sure it will continue to go down. Other places are without alteration.

NEW WHEEL VADON.—P. Floyd: Milldrum's shaft is down to the 20, and we have to drive about 4 fathoms east to meet the 20 end, driving west from the engine-shaft. We expect to have about the end of next month, if the ground should confine, a favourable. In the 12, driving west of Milldrum's shaft, the lode is 3 feet wide, and worth 5¢, per fathom; the slopes in the back and bottom of this level are worth 8¢, per fathom. The ground in the cross-cut, driving south from this level, is favourable, and we expect to reach the Milldrum standard lode in about 3 feet. In the 12, driving west of new shaft, on Tolvalden lode, the lode is 3 ft. wide, producing saving work for tin, of a most promising character to produce copper in depth. We shall resume the sinking of the new shaft at once, and commence to drive west on the Wheel Charlotte lode. Our tin sampling is about as follows:

—J. Vivian, Dec. 22: I would say the local and geological position of these mines is one that stands second to none in the county. The new shaft at Wheel Vadon is a continuation east of the same rich lodes as Tolvalden, Wheel Charlotte, and Old Wheel Neptune—mines which need little or no comment from me, as the two former tell for themselves, and the latter was one of the richest deposits of copper ore in the county. On these lodes you have an extensive run. East of your valuable set, on the same run of lodes, is the Old Wheel Speedwell, that returned a great amount of copper ore; two of these lodes, on which life has been done, are large and promising, traversing the set nearly in the same direction; they vary from 2 to 6 ft. wide. Besides these there are others of good promise, on which only a certain pit has been sunk, but a few feet from surface; one of these has produced fine samples of rich silver ore. The width of the set is also traversed by tin lodes; two of these have been wrought on to some extent—the Millpool standard lode and the north tin lode; these, with what is most desirable (next to tin and copper), are accompanied by a fine elvan course, which intersects the first-mentioned, or Tolvalden lode; at these points they have been found to be very productive. Besides these there are several crossings, small lodes, or feeders, intersecting the lodes; these points are made good as may be seen at present a few feet west of the new shaft, on the north tin lode, where there is a good lode of tin. In these mines little has been done, with the exception of the adit, which is 40 fms. from surface at the engine-shaft, the back of which may be made available, with a small outlay, of a very considerable extent of workings in itself, and I have no doubt, will yield a considerable amount of tin, as the former workers extended this level a great many fathoms (140) by the side of the lode without ever cutting into it. East, and on the run of the last-mentioned tin lodes, and adjoining you, are mines belonging to Mr. R. R. Mitchell, at present paying no dividends. From a personal inspection of the two mines, I should say the backs of the copper lodes in the Tolvalden are precisely the same as those in the Tolvalden Mines; and I hesitate not to say it is my opinion that if these mines are put into a full and efficient state of working, there can be no doubt that they will shortly become a most remunerative property; in fact, that immense profits will result to the shareholders.

NEW WHEEL VOR AND EAST WHEEL METAL.—Joseph Vivian, N. Thomas, Dec. 18: Great North Lode: The shaftmen at Harriett engine-shaft are still employed in fixing the pitwork, &c. The lode in the 45, driving east, is large and kindly, producing a little tin. The lode in the 30, driving east, is still of unknown width, and very kindly in appearance, producing saving work for tin.—Wheel Bramble: The lode at Little engine-shaft, sinking below the 10, is worth 30¢, per fathom. The lode in the 10, driving east, is worth 10¢, per fm. The lode in the same level, driving west, is worth 9¢, per fm.; the stone in the slopes in this level are worth 12¢, per fm. The lode in the adit level, driving east, is 2 ft. wide, producing a little tin. No alteration in any other part of the mine since last report.

NORTH DOWNS.—E. Ralph, J. Grenfell: The sinking of the engine-shaft is being pushed on with all possible speed; we hope to get to the 40 by the end of the week. In the 30, east of engine-shaft, the lode is again forming itself more regular, and is about 18 in. wide, and will produce 1 ton of ore per fm. The winze sinking under this level, on the north part of the lode, is down 3 ft. 2 in., and from its present underlie we expect it will form a good result may be anticipated. The 20, driving east of Bennett's shaft, on the north lode, is very promising, 10 ft. wide, worth 6¢, per fm. The ends driving both east and west, are producing good stones of ore, and are producing good tin. We have laid open tribute ground. The winze sinking below the 20, west of Bennett's shaft, is down about 6½ fms., the lode is more promising than we have seen it for some time, and will be communicated to the next level in about two months from this date. The cross-cut, south of the engine-shaft, is in a beautiful stratum of ground for mineral, and progressing satisfactorily. Our tribute pitches are producing their usual quantity of ore.

NORTH WHEEL ROBERT.—W. Godden, Dec. 18: The lode in the winze sinking below the 42, west of Trial shaft, is improving, now worth 4 tons of good ore per fathom. The south lode, east of Trial shaft, is also improving were broken into. The piece we have standing looks splendid; when taken down you shall be advised of its value.

OLD TOLGUS UNITED.—G. Reynolds, Dec. 21: The cross-cut in the 42 is now driven from the shaft 11 fms. 2 ft., and we still continue to drive the same with vigour. The engine-shaft is nearly 4 fms. below the 42; the ground at present is not so favourable for sinking as it has been. We have again taken down the south lode going west in the 32, and still continues to yield fully 2 tons of copper ore per fm., with a lasting appearance; we have six men driving the present end, in order to lay open tribute ground as soon as possible; the slopes behind this end are worth 3 tons of copper ore per fm., and bid fair for improving as they lengthen westward. This lode going east is 18 in. wide, and seems to be improving, producing good stones of copper ore and 1 ton of blende per fm.; the slopes behind this end are worth 1½ tons of copper ore and 1 ton of blende per fm. The engine lode, going west in the 32, is 1 foot wide, and looking promising, producing good stones of ore; on the north lode, going back east, this point is not looking so well at present. In the winze sinking below the 16 we have water, and have suspended sinking same until the 32 end is driven to the level where the winze is to be drained. We would advise putting these men to drive a cross-cut at this point, which is 50 fms. west of engine-shaft; by doing so we should cut through the whole of the cauter, and prove if we have the main part of the engine lode, and also by extending the cross-cut about 10 fms. we should intersect the south lode, which is now so productive going west. The new south lode, going west at trial shaft, is 8 in. wide, composed of mullite and stones of rich yellow copper ore. At present we have 41 underground men, 2 engine-men, 2 landers, 1 carpenter, 1 blacksmith and striker, and 2 surface men; total, 50; we have about 20 boys and girls dressing at surface. Should the present prospects continue our returns will greatly increase. We will sample this day about 40 tons of copper ore.

PEDDAN-DREA UNITED.—W. Reynolds, Dec. 17: Since our last bi-monthly meeting I have inspected these mines, wherein I hold a large interest, and the appearances are such that I consider it my duty to send you this report, that my co-adventurers may know our present prospects. The sump-shaft is sunk to the 100, and it is hoped that in six weeks from this the pit will be cut, when I hope all speed will be used in sinking deeper, as the lode has such a promising appearance going down; it is large in size, from 6 to 8 ft. wide, producing tin throughout. It will also be of great importance to drive the 100 east, so as to get under the great deposit of tin so productive in the 90, with every appearance of improving in depth. I should have stated before our great indebtedness to sink the sump-shaft is the junction that must take place a few fathoms of three lodes—Martin's, the engine, and Skimmer's lodes; and when we arrive at the point of intersection, and have time to lay open the ground, I calculate we shall be able to raise as much tin-stuff as our machinery can draw to grass. The 90 west, on Skimmer's lode, is improving as it leaves the cross-course, it is 4 ft. wide. The 90 east is not working, as we have as yet no place to get away the stuff. The engine lode has the same appearance as Skimmer's lode driving west. The ground west of engine-shaft, near Cobble's shaft, has a very good appearance; and we are sinking Cobble's shaft as fast as possible. It would be well to sink the level at the level of the Cobble's shaft, by which means the mine will be well ventilated throughout, and the men able to do their work much easier and at less expense. At the present time the engine-shaft is the only one in the mine sunk below the 50. The eastern part of the mine—that is, Bragg's—is only 40 fms. deep; but as soon as convenient it is proposed to sink to the 47, and communicate with the 47 on the engine lode, when we shall be in

a position to lay open a quantity of tribute ground; there will be four parcels of tributaries working there in a week's time, by which the value of the lode will be proved. The new lode in the 55 south is a very promising lode, spotted with copper, and from 4 ft. to 6 ft. wide. We also hope to cut some other lodes during the next month or two in driving south from Bragg's shaft. The mine throughout is looking better than I have ever seen it before, and the surface operations are going on steadily. I consider the agents are doing their best, and ably conducting the mine.

Capts. Carpenter and Delbridge, Dec. 18: The lode at the engine-shaft, sinking below the 90, is from 6 to 7 ft. wide, producing stamping work of low quality. Without accident, we expect by the end of next week to sink to the 100; that being done, we shall bring down our skip-road to the bottom, and commence to drive east and west at the 100 with all dispatch. In the 90 west, on engine and Skimmer's lodes, these lodes are about 10 fms. apart, with promising appearances, producing saving work for tin. In the 55 east, on new lode, the lode is about 4 ft. wide, letting out a large quantity of water, with occasional small stones of copper ore; it is a very strong, kindly looking lode, though at present unproductive. Other parts of the mine are without change to notice. We sampled for Nov. 21 tons 19 cwt. 9 qrs. 18 lbs. of black tin.

PENDEEN CONSOLS.—W. Eddy, J. Cartwright, Dec. 18: In the 94 north the lode is 2 ft. wide, with a leader of ore 10 in. wide, and will produce 2 tons of ore per fm., worth 12¢; driving east, 10¢. In the 94 south the lode is poor, driving for 5¢, per fm. In the 82 north the lode is large, composed of quartz, jasper, and copper; driving for 5¢, per fm. In the 70 north the lode is looking very promising, but poor; driving for 4¢, 10¢, per fm. Our two stop pitches, north and south of No. 2 winze, we have now set in one tribute pit to 10 men, at 4¢, in M.; the lode here is looking well, and worth 20¢, per fm. All our other stopes are producing a fair quantity of ore, and our prospects are now very good. All our machinery is in good working order, and we intend to crush to-day and on Monday 50 tons of ore.

PENGUNNA.—Emanuel Hitchens: Having known this mine during the last 20 years, before which time it had been extensively worked by the ancients above the adit level, and thence of pounds worth of lead and silver raised from it. When I first knew the mine it was worked by three or four gentlemen of Tavistock and elsewhere, who returned large quantities of lead, silver, and antimony; but they eventually set it to Capt. Peters as a tribute pitch above the adit, who extracted from it hundreds of tons of lead, silver, and other ore, and he did exceedingly well. After the expiration of his lease I and some other miners took tribute pitches in the backs, and were very well satisfied with our earnings. The mine is now very shallow, very little having been done under the adit; indeed, nothing worth mentioning; and I consequently think it a very good speculation for any company to embark in. During the last five years very little has been done, but the original company (that is, the Tavistock gentlemen) decided on making a call to drive the adit level into the eastern maiden ground; and, for the purpose of carrying out their intention, a winze was erected, the level cleared, and air-solids put in; but the principal shareholder being on the Continent, and, I believe, in difficulties, his portion of the cost could not be obtained, therefore nothing further was done until the set was purchased by Mr. Nicholas Eamer, who (when it came into his hands) commenced a regular system of cost-mining, and in doing so discovered six new lodes, and also the lost eastern portion of the main lode, which has been heaved or shifted by a cross lode. It had been searched for from time to time by every agent who had previously had the management during forty years, but without success. It is one of the finest lodes I have ever seen, and from 5 feet to 5½ feet wide, showing blue and white lead in every pit sunk on it. All the other newly-discovered lodes produce ore at surface, and such gossans as I never before witnessed, except in Old Trebarger, the adjoining mine. Some of these lodes are very rich for silver; indeed, a sample I took last week from one of them in the north part of the set produced by assay 400 ounces of silver per ton. I also broke ½ cwt. of ore from a lode in the south portion of the mine, and sent it to Mr. Denkin, of Callington, whose return is 400 ounces per ton. In doing so, many of the miners say, as it is worth for copper ore 2½ tons per fm., I never witnessed such a promising set as the Pengunna now appears, nor one that can be proved at so little cost—viz., by extending the deep adit east, which will lay open 24 fms. of backs. This mine is well worth the inspection of all interested in mining.

PRIDEAUX WOOD.—F. Gill, P. Rich, Dec. 29: In the 61, east of Kendall's shaft, on Kendall's lode, the lode is 1 ft. wide, containing mullite, and on the north part of the lode we have a bunch producing good stones of tin. In the 51, east of Kendall's shaft, the lode is 1 ft. 6 in. wide, at present poor. The lode in the 51 is much the same as last reported. We have completed Bawden's shaft to the adit; at this point we have commenced driving the adit east; the lode is from 6 to 7 ft. wide, producing saving work for copper ore, and of a very promising character. There is nothing new to report on in any other part of the mine.

QUEEN OF DAIR.—P. Hawke, Dec. 23: The lode in the 30 east, at sump-shaft, is 1½ ft. wide, composed of mullite and copper ore, a very kindly lode; the slope in the back of the 30, to the east of sump-shaft, is worth for copper ore 2½ tons per fm. In the 20, in the back of the 20, to the west of boundary shaft, is worth for copper ore 2 tons per fathom. C. slope, in the bottom of the 20, to the west of boundary shaft, is worth for copper ore 1 ton per fathom. D. tribute slope, in the bottom of the 20, to the east of boundary shaft, near the cauter lode, is worth for copper ore 3½ tons per fm. We have not taken down any lode in the 20, to the east of boundary shaft, since last reported on, but continue to drive in the kyllas by the side of it for dispatch; we find the lode so far to be continuous at the intersection with the cauter lode. We are progressing favourably with sinking the boundary shaft. The same remarks would be applicable in relation to taking down the lode in the 20 east; and it will be well to remain for dispatch also, until we complete the shaft to the depth of 12 fathoms below the 20, which we anticipate doing this month, when a pit will be cut, and the piece of lode referred to taken down. Notwithstanding the heavy rains of late, that have caused the River Dart to roll down in such torrents, nothing has occurred with the machinery to impede our progress.

REDMOOR.—Thos. Taylor, Dec. 21: In the 80 west, on the Count-house shaft lode, we have intersected Goodman's lode, which is about 18 in. wide, composed of spar and mullite, spotted with yellow copper ore; by the end of this week we shall know if it is worth driving on. We have been desuing the lode in the 80 east, on Kelly Bray. The 80 west is without alteration. We have commenced a winze in the bottom of the 50, on Kelly Bray; the lode is 2 feet wide, composed of mullite, spar, gossan, and some good saving work.

RIFEDOL.—Capt. Ridge, Dec. 18: In the Rathdu deep adit level the lode is composed of floukan and spar, 2 feet wide, and letting out water. In Rurrurgus deep adit level the lode is from 2 to 3 ft. wide, composed of gossan and floukan, and very good ground for driving. In the midway level, driving west, the lode is 2 ft. wide, composed of blende. In No. 1 slope, east of No. 1 rise, the lode is 2 to 3 ft. wide, chiefly composed of blende. In No. 2 slope, east of No. 2 rise, the lode is from 4 to 5 ft. wide, 3 ft. of solid blende. In No. 3 slope, west of No. 2 rise, the lode is from 2 to 3 ft. wide, 2 ft. of blende, nearly solid.—Rurrurgus Upper Workings: In the 10, driving west, the lode is 18 in. wide, of nearly solid blende, and runnings lead from the ground. In the 8 in. 2 slope, east of No. 3 winze, the lode is 2 ft. wide, composed of blende and branches of lead. In No. 2 slope, west of No. 3 winze, the lode is from 2 to 3 feet wide, with a good mixture of blende. In No. 3 slope, west of No. 3 winze, the lode is 18 in. wide, of blende, nearly solid. We intend to sample 100 tons blende at the end of the month, weather permitting.

RIBBEN.—R. Niness, Dec. 23: The building of the engine-house is going on favourably, the engine is already on the ground, and the boiler will also be there in a day or two. Everything is going on well, and the appearance of the mine is much the same as when I last wrote.

RITTON CASTLE.—J. Lester, Dec. 21: We have now driven 4 fms. 2 ft., from the cross-cut, on the course of the No. 3 lode, which is still small and poor, but we are pushing on with all speed to get under the point of the ore ground above.

RIVER TAMAR.—J. Cook, Dec. 21: In the adit level we have driven through the elvan; the end is now in good kyllas, and the lode is 4 ft. wide, spotted with copper ore. The 70 fathom level, on the south lode, is yielding good stones of copper ore, and has a very kindly appearance.

ROSEWALL HILL AND RANSOM UNITED.—Paul Roach, Dec. 22: Since the 15th instant we have opened ground for a pit at the 100, at the engine-shaft, and are making preparations for fixing a plunger in that level; we have driven the 80 east of 2 fms. (the lode here is 2 ft. wide, and clear enough to be intersected; but the lode we have driven the 80 west 3 ft. 2 in., and the 40 east 2 ft. (the lode in the two latter ends is much the same as last reported); we have also driven the 30 north on the cross-course 1 fm.; in the last 4 fms. we have cut three different branches; they are small, yet they produce tin, but not enough to make them of any commercial value. We intend driving still further north.

SOFTIDGE CONSOLS.—Robt. Jackson, Dec. 23: At Hitchens's engine-shaft nothing has been done this week, owing to so much rain. The water has been so quick that the engine has not been able to keep it; it is forking again now, and I hope the men will be able to work in a day or two. There is no change to notice in any other part of the mine since last reported.

SOUTH BULLER AND WEST PENSTRUTHAL.—J. Reynolds, Dec. 21: The cross-cut is continued on towards the lode with all speed; the ground at present is letting out much water, therefore I calculate we are near it. Should the lode continue perpendicular, as seen at surface, by driving from 2 to 3 fms. further it will be intersected; but should the lode north underlie, as such is the case further east, the distance then would be greater. Should we intersect the same by driving the above distance, I will at once report to you.

SOUTH CARN BREA.—T. Glanville, Dec. 22: There is no alteration to notice.

SOUTH CARADON WHEAL HOOPER.—W. C. Cook, Dec. 18: We are progressing favourably with the working of the mine; the water is drained to the 60. I have just been underground, and have broken some stones of copper ore from a lode about 40 fms. south of the junction of the granite and kyllas, and about 50 fms. south of the shaft. I also found a little ore in a lode about 7 fms. still further south; both the lodes are in the kyllas at this level, and I think will probably form a junction in depth. I have not had the winze cleared up in the 50, the men being required about other work of a more pressing nature; this will be attended to the early part of next week.

SOUTH CRENVELL.—J. Delbridge, E. Chegwain, Dec. 18: The 105 is extended west of the shaft 35 fathoms, about 10 fms. in ore ground; at present the lode is 2½ ft. wide, and worth 8¢, per fathom. We have in the back of this level 10 fathoms of ore in unworked ground, which is opening by two rises; the lode in each rise is worth 8¢, per fathom. The lode in the 74 is worth 3¢, 10¢, per fm., the ground is whole to surface, and from present appearance is likely to yield a large amount of low price ore; this we purpose rising with all speed. In the 84 east the lode is 1½ ft. wide, and worth ½ ton of ore per fathom; the ground here is more favourable, and we have a promising piece of ground in the 74 above; we recommend this to be driven by two men. We purpose rising in the 105 west, by four men in each rise, as at present they are worth 8¢, per fathom; from this rise, No. 2 west, we have a piece of ore ground 18 to 20 fathoms long, gone down in the 94. The 84 slopes, east of Gore's, are yielding a quantity of good grey stuff, so as to return the ore to a profit. Capt. Ridge has this day inspected the mine for a firm in London, whose report cannot be otherwise than favourable.

SOUTH DOLOCOATH AND CARNARTHEN CONSOLS.—Wm. Roberts, Dec. 21: No alteration to notice since last reported. The cross-cuts are progressing favourably.

SOUTH LADY BERTHA.—William Goss, Dec. 23: I have succeeded in clearing up the sink in the bottom of the 40. The branch of mullite and ore is from 10 to 12 in. wide, and when a deeper level is reached will produce a quantity of ore. I am having the place secured with timber, when we shall open the backs on the cross-course, where we have some beautiful stones of ore, but this cross-course being 12 feet wide, we must proceed carefully, especially next week. I am having the south end on the cross-course cleared, so as to drive south, as you will see by the plan sent that our main lodes in the upper levels are all south in the 40. In the back of the 40, east of the shaft, the lode is ore for a great many fathoms in length. All things now being in working will be stopped, so as to return the ore to a profit. Capt. Ridge has this day inspected the mine for a firm in London, whose report cannot be otherwise than favourable.

SOUTH WHEAL BETSY.—Chas. Bartle, Dec. 21: In the pitch north of the winze-shaft the lode is 3 ft. wide, worth 6¢, per fathom. In the pitch in back of the 10 north the lode is 2 ft. wide, worth 6¢, per fathom. In the 10, north of winze-shaft, we have driven a cross-cut east 2 fms., and intersected a lode 2 ft. wide, richly charged with grey and black copper ore, with sheets of malleable copper and lead. In the 20, north of the

winze-shaft, the lode is from 3 to 4 ft. wide, producing good work for lead. We have made the winze-shaft complete to the 20, and are in course of cutting a pit and driving the end north, to effect a communication with the rise. Other parts of the mine much as when last reported.

SOUTH WHEAL TOLGUS.—Dec. 18: Youren's Lode: At Mitchell's engine-shaft, sinking below the 110, the lode is 18 in. wide, unproductive. The lode in the 110 east is 10 in. wide, poor. The lode in the 110 west is 2 ft. wide, yielding 4 tons of ore per fm. In the 110 west, on the cauter, the lode is 1 ft. wide, producing 1 ton of ore per fm. The western slope, in the back of the 110, west of Mitchell's, is yielding 3 tons of ore per fm., and eastern slope in back of the 110, and west of Mitchell's, is yielding 2 tons of ore per fm. The lode in the 109, west of Mitchell's, is looking more kindly (over 10 in. wide), producing good stones of ore. In the winze sinking in the bottom of the above level the lode is 1 ft. wide, producing good stones of ore. The average yield of the three stopes in the back of the 100 west is worth from 2 to 3 tons of ore per fm. each. No lode taken down in the 99 west since last reported.—South Lode: The lode in the 90 in the back of the 110, east of Mitchell's, is about 1 ft. wide, unproductive. The same remark will apply to the winze sinking in the bottom of the 100, to communicate with the before-mentioned rise, and which we hope to accomplish next week. In the 109 east the lode is 2 ft. wide, producing ½ ton of ore per fm. The lode in the 90 east is 10 in. wide, unproductive. The lode in the winze sinking in the bottom of the above level is 18 in. wide, yielding 1 ton of ore per fm. This winze, if sunk as deep as the back of the 100, but the 100 end has to be driven 13 fms. more to get under the winze. On Monday we shall put the men from the above winze to sink in the bottom of the 90 west, on Youren's lode, to make a communication with the slope in the back of the 100. The lode in the winze sinking in the bottom of the 78 east is 2 ft. wide, unproductive. The ground in the 78 cross-cut, south of Mitchell's engine-shaft, is moderately easy.

SUNNY SIDE.—John Bell, Dec. 30: Both the sinking at the South Beck shaft and the driving of the adit forehead have been pushed on with vigour since my last. The shaft is nearly 10 fms. deep. We have no water yet, and are not likely to have much in the whole sinking. In the adit the ground is much the same as last reported.

TAVY CONSOLS.—J. Hodge, Dec. 11: In the 94 a cross-cut is being driven south; Capt. Phillips thinks the lode is 14 fms. south, and 7 fms. out of the 14 fms. are driven on a cross-course. In the 55—65, in fact, all the levels are driven east, the 56 being within 24 fms. of the boundary, the ore dipping east, and followed down to the level of the 68 ought to be driven, should the lode be 14 fms. south; this cannot be the main lode.

—J. Hodge, Dec. 12: The 20 west at Lady Bertha is driven to the boundary of Tavy Consols; the lode in the end is all carbonate of copper and greens, and showing copper ahead. If Capt. Phillips is right with his dialling all must be right. The machinery is worth about 6000.

—W. Goss, Dec. 12: I have a note from Captain Hodge, wherein he states the Lady Bertha lode is worth 60¢, 40¢, and 30¢, per fm. I have dialled the lodes of both mines being over again, and an certain 100 fms. in correct, the Lady Bertha lode has not been seen after passing the junction in Tavy, and that it is now standing whole for 100 fms.

—J. G. Phillips, Dec. 17: We have driven the cross-cut in the 30, 12 fms., and have 15 fms. to drive to cut the south lode, which is a most important feature, the lode being unwrought to surface; the ground is highly mineralised, and from present indications we are likely to find rich deposits of copper ore, which will at once place Tavy Consols among the richest mines of the district. A shaft will be sunk on the old lode, which will lay open a large quantity of ore ground. The main lode having been intersected by a lode; at this intersection we have large bunches of ore, and having a great length of ground unwrought, shall make good returns from these stopes. We have sampled and sold 40 tons of copper ore last month.

TINCROFT.—Capts. Teague, Andrew, and Cook, Dec. 21: Highburrow Lode: In the 17½, driving east of Martin's east shaft, the lode is 4 ft. wide; worth for tin 30¢, per fm. In the 17½, driving west of shaft, the lode is 2½ ft. wide; worth for tin 10¢, per fm. In the 16½, driving east of shaft, the lode is 3 ft. wide; worth for tin and copper 16¢, per fm. In the 15½, driving east of shaft, the lode is 2½ ft. wide; worth for tin 15¢, per fm. In the old engine shaft, sinking under the 16½, there is no alteration since last reported. In the 16½, driving west of shaft, the lode is 2 ft. wide; worth for tin 10¢, per fm. We have suspended the 14½ west from downward shaft for a short time, and the men are engaged taking down a part of the lode up to the north of said level. In the 13½, west of shaft, the lode is 2½ ft. wide; worth for tin 10¢, per fm. The network at North Tincroft may be said to be without alteration since last reported on.

TOLCARNE.—Dec. 18: Field's shaft, went down by nine men, instead of eight as before, set at 14 fms. The adit cut to drive west for four men, at 7½, 10¢, per fm. The lode in the end is from 10 in. to 1 ft. wide, worth from 10¢ to 12¢, a fathom, a pretty looking lode.

TRETOIL AND MESSER UNITED.—R. Rich, Dec. 22: I advised you last week of an improvement that had taken place in the adit west, on the north part of the tin lode. We have driven since then 2 fms. This part of the lode is 4 ft. wide, the lending part being 1½ ft. wide, composed of spar and yellow and grey copper ore, and will yield about 1 ton of the latter per fm., worth 10¢, per fm. The south part of this lode is also becoming more ore, and from its general appearance we have reason to expect a further improvement. This level is being driven at 49¢, per fm., the takers to pay 88, per fm. for wheeling the stuff. We look upon this as a very important discovery, this level being 40 fms. from surface, and the level levels from the tin lode can be driven down this place when the water is drained below it. In the adit cross-cut south a slide is making down from the back of the level, consequently a great change has taken place in the ground. We shall be able to drive this cross-cut now much faster than we have been able to do for some time past. The walls of the engine-house are up to their required height, and the wood-work of the roof is fixed. We hope to get it covered in a few days.—Messer: We have had some heavy work done here preparatory to the setting of the engine to work; and, notwithstanding the unfavourable weather we have experienced of late, good progress has been made, and we still hope to set the engine to work next week. The level—driven from the valley to carry the spring water to the engine for condensing, &c.—is holed to the engine-shaft. This is an important arrangement, and will effect great saving in the future working of the mine. The new shaft, about 40 fms. from the boundary, is down about 17 fms. perpendicular from the surface. The north part of the lode was met with 14 fms. below surface. Good stones of copper ore have been broken in this part of the lode. We propose now to cut a pit at the present depth, to cross-cut south and to drive west on the south part, and to continue the sinking of the shaft on the north part of the lode, where the ground is favourable.

TREWEATHA.—T. Richards, Wm. Rowe, Dec. 22: The engine-shaft is down 2 fms. 4 ft. below the 90. The 90 end south is producing some saving work. In the same level the lode is worth 3¢, per fm. The 70 north is producing some saving work. This water is much increased in the winze in the bottom of this level that we are obliged to suspend it for the present, until the 90 north is further advanced. The eastern lode, in the 50 north, is without change. The stopes are producing much as for some time past.

TYNE HEAD.—G. Millican, Dec. 13: We have a tolerably good mine at Tyne Head, where the men were working the last time you were here. We have not got much ground opened yet, but as far as we have seen it will leave a profit of 2¢, per fm. at the least. There is one rib of ore nearly pure, 3 in. wide, and another about 1 in. wide, intermixed with ore between. It is a very good thing at present, and likely to continue.

—Dec. 18: The ore in the rise has improved during the last three days. This discovery is in the north and south vein, called Sir John's vein, in limestone.

VALE OF TOWRY.—T. Harvey, S. Harper, Dec. 21: In cutting a pit for the 70, at Clay's engine-shaft, we find more lode standing against the eastern side, and are of opinion it is the main part; we have not cut through it yet, but from what can be seen it is about 1½ ft. wide, producing some good stones of lead. We shall intersect this lode by driving about 4 or 5 fms. north. The lode in the 60 north is 2 ft. wide, producing 5 cwt. of lead per

In **SALTPETRE**, during the past week but very little has been done, buyers being with great difficulty obtained, even at a reduction. We note sales of 550 bags Bengal, $\frac{3}{4}$ per cent. refraction, 39s. 6d.; $\frac{5}{8}$ per cent. refraction, 40s. to 42s.; and $\frac{7}{8}$ per cent. refraction, 39s.: 19 bags of Bengal were also offered at public auction, but either withdrawn or bought in, $\frac{12}{16}$ to $\frac{7}{8}$ per cent. refraction, 40s. and 45s.; $\frac{3}{4}$ per cent. refraction, 41s. During last week 293 tons have been landed, and 115 tons delivered, leaving the stock in hand 2605 tons, against 6623 tons at

same time last year. The contract with the Belgian Government for 372 tons of refined has been taken at about 45s. per cwt. In last week's impression, page 830, the stock on hand should have been 2430 tons, against 6560 tons at the same time last year, instead of the quantity stated.

The approach of the Christmas holidays generally brings with it a diminution of business, but we cannot as yet observe much change in the Mining Market. Great activity has prevailed during the week, and the demand for several mines is exceedingly great. In fact, the rise in metals, and the improved position in which most mines stand, are daily bringing capitalists into the market; and, compared with business doing on the Stock Exchange in other classes of securities, the Mining Market is enjoying a species of monopoly in business. Grambler and St. Aubyn shares have been in demand, and advanced to 142½, 147½; the ore sampled, and to which we referred last week, will realise upwards of 26000, instead of 20000, as we then estimated it, wishing rather to be under than over the mark. Condurow shares have also been in good request, and have risen to 60, 70. Carn Brea, 67½ to 72½, buyers, and no sellers. Wheel Mary Ann, 44 to 45, ex div. East Basset continued till Thursday at 160 to 165, when late in the day a great demand sprang up, and shares leave off at 170, 175; the ore sampled (120 tons) is calculated to produce 19000; 61 tons from the new discovery in the 80 yield a produce of 19 per cent., and 59 tons a produce of 13½ per cent.; sanguine as we ever were in regard to this mine, the extraordinary richness of the discovery has far surpassed even our expectations, and we were almost alone in upholding it as a speculation. Providence Mines, 61 to 63, and looking remarkably well in the new discovery. Trevoile, 15 to 16, and the mine greatly improved. Rosewarne and Herland, 9 to 10, and in demand, with few sellers. Wheel Crebore shares have been quiet during the week at 1 to 1. Redmoor rather more enquired for at 4s. to 5s.; the mine has sampled this week 31 tons of lead ore, 17 tons of it being of first quality. Wheel Trelawny shares have been done at 29 to 30; the capels of the lode have been cut through in the bottom level, and next week the value of the lode may be known. Wheel Charlotte, 18 to 20; Wheel Addams, 1½ to 1½; Lady Bertha, 1½ to 1½; East Russell, 7½ to 7½; the mine is looking well, and the sampling next week to be 70 tons of good copper ore. Marke Valley, 2½ to 2½; Herod-foot, 7 to 7½; Great Hewas, 10s. to 11s.; East Rosewarne, 7½ to 7½; Wheel Grenville, 28s. to 30s. Wheel Margaret, 62½ to 65, and in demand, with few sellers. North Dolcoath, 5½ to 6½; Kelly Bray, 2½ to 2½; West Caradon advanced to 137½, 140; Tamar Consols, 1 to 1½; Tincroft, 3½ to 3½; Bryntail, 10½ to 11. South Basset, 63 to 64, and in considerable demand, in expectation of cutting the lode. United Mines have been in demand, and advanced to 122½, 127½. West Seton, 290 to 295, ex div.; West Basset, 21 to 22; North Basset, 8 to 8½; Great South Tolgus, 12 to 13; Wheel Edward, 2½ to 2½; Wheel Kitty (St. Agnes), 3½ to 4½; Nanteos and Penrhwy, 1½ to 1½; South Caradon Wheel Hooper, 4 to 4½; Camborne Veau, 4 to 4½; Great Alfred, 3 to 3½; North Rosekar, 21 to 22; Craddock Moor, 29 to 31. North Robert, after receding to 2½, 2½, advanced to 2½, and a large business done. Wheel Harriet, 14s. to 16s.; Par Consols, 15 to 16; Wheel Hender, 1½ to 1½, and in demand; Rosewarne, 20 to 25. Wheel Basset, 210 to 220; a large sampling has been made here, and the mine looking well. South Frances, 230 to 235; Vale of Towy, 12s. to 13s.; Tolcarne, 15s. to 16s.; Alfred Consols, 7½ to 8½, and rather enquired for; Gonama shares are flatter, at 7½ to 8; Ludcott, 43s. to 45s. Wheel Wrey, 2½ to 2½; at the meeting, a call of 2s. 6d. per share was made.

The Board of Trade Returns for November were issued yesterday. The exports of articles identified with mining, the produce and manufacture of the United Kingdom, were:—

	1856.	1857.	1858.
Metals—Pig-iron	£119,892	£108,919	£ 59,437
Bar-iron.....	454,733	388,892	395,436
Wire-iron.....	25,391	27,048	26,271
Cast-iron.....	79,215	69,429	49,975
Wrought-iron.....	329,410	321,454	245,944
Steel, unwrought.....	70,936	39,199	45,712
Copper, unwrought.....	50,246	82,806	81,882
Copper sheet and nails.....	159,729	108,338	141,205
Lead.....	40,899	25,613	26,559
Tin, unwrought.....	17,555	17,318	10,941
Tin-plates.....	136,269	53,392	100,874
Coals and culm.....	196,267	253,514	191,333
Hardware and cutlery.....	371,564	315,992	291,531
Steam machinery.....	101,516	44,394	45,044
Other machinery.....	172,249	250,262	150,463
Salt.....	35,305	17,322	17,252

From this it will be seen that iron does not occupy so good a position as last year, and unwrought tin likewise shows a decline; unwrought copper remains about stationary; steel, copper sheets and nails, and lead, show a fair increase, and the exports of tin-plates have nearly doubled.

In the COAL MARKET, during the past week very little has been doing, in consequence of the small number of arrivals. On Monday as there were no house coals at market, the prices obtained for the other qualities were 15s. 6d. to 16s. 9d. for manufacturers', and 14s. for Hartley's; there were only 12 ships at market, the whole of which were sold. On Wednesday there was a small arrival of best and second qualities; and there being only 24 ships at market they were immediately bought up. Yesterday the closing prices were—Best, 18s. 6d. to 19s. 3d.; seconds, 17s. 3d. to 18s. 9d.; manufacturers', 15s. 6d. to 16s. 3d.; Hartley's, 14s. 9d.; and steam qualities, 21s.

EXPORTS OF COAL IN NOVEMBER.—From Messrs. Laird and Co.'s Statistics of the Coal Trade, it appears that the total exports last month were 367,408 tons, showing a decrease, compared with the corresponding month of last year, of 115,573 tons. The total exports from Jan. to Nov. inclusive were 5,696,786 tons, being a decrease, compared with the same period of 1857, of 168,120 tons. During November the northern ports exported 175,746 tons—decrease, 72,140; Yorkshire ports, 20,286 tons—decrease, 5226; Liverpool, 26,437 tons—decrease, 24,886; Severn ports, 113,725 tons—decrease, 3462; Scotch ports, 31,214 tons—decrease, 16,783 tons.

At Truro Ticketing, on Thursday, 4431 tons of ore were sold, realising 24,990l. 12s. 0d. The particulars of the sale were—Average standard, 139l. 12s.; average produce, 6; average price, 5l. 13s.; quantity of fine copper, 266 tons 7 cwt. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Price per ton.	Ore copper.
Nov. 25	3285	£135 10	6½	£6 0 6	£93 0
Dec. 2	3704	134 14	6½	6 3 0	93 3
" 9	4109	136 9	6½	6 2 6	94 3
" 23	4431	139 12	6	5 13 0	93 17

Compared with last week's sale, the advance has been in the standard 17 9s., and in the price per ton of ore about 2s. Compared with the corresponding sale of last month, the advance has been in the standard 2l. 8s., and in the price per ton of ore 3s.

At Swansea Ticketing, on Tuesday, 919 tons of ore were sold, realising 24,780l. 17s. 6d. The particulars of the sale were—Average standard, 104l. 3s. 6d.; average produce, 28; average price per ton, 26l. 19s. 6d. The particulars of the sales during the past month have been:—

Date.	Tons.	Standard.	Produce.	Price.	Ore cop.
Nov. 23	1877	£112 7 0	11 7-16	£10 11 0	£92 15 0
Dec. 21	919	104 3 6	28	26 19 6	96 6 0

There had been no sale since November 23; compared with that sale the standard and price per ton of ore show a trifling advance. On Tuesday, of the 919 tons sold 199 were British, which gave an average produce of 11 3-16, and realised 10l. 13s. per ton, the average standard being 10l. 8s. 6d. The 720 tons of foreign ore gave an average produce of 32 11-16, and realised 31l. 9s. 6d. per ton, the average standard being 10l. 2s. 6d. The high produce of the foreign ore is explained thus:—The Cobre Company sold eleven parcels, the lowest produce being 33, and the highest 34½; Wheel Maria three parcels, lowest 36½, highest 41½; English and Canadian Mining Company, three small parcels (total 5 tons), lowest 21½, highest 52½; and there were 28 tons of Australian regulus, produce 57½, included in the sale.—On Tuesday next 1302 tons will be sold, the ores being from Cobre, Berehaven, Wheel Maria, Springbok, and Holyford.

Foxdale (Isle of Man) declared a dividend of 1l. per share on Tuesday.

At Wheel Grylls meeting, on Dec. 14, the accounts showed—Balance last audit, 140l.; ore sold (less lord's dues, 1-18th, 53l. 12s. 3d.), 911l. 8s. 11d.; St. Aubyn and Grylls—whim-drawing, 3l. 12s. 1d.=1055l. 1s.—Mines cost, from May to Oct., 599l. 4s.; merchants' bills, 56l. 11s. 1d.; leaving credit balance, 699l. 5s. 11d. A dividend of 256l. (3s. per share) was declared, and a balance of 143l. 5s. 11d. carried to next account. Capt. Osborne's salary was increased to 5l. 5s. per month. Capt. M. White and Osborne reported that a new shaft from surface had been sunk 24 fms., and a cross-cut had been driven from the shallow level to this shaft, which had cost about 600l. There were 12 men on tribute, varying from 7s. 6d. to 11s. in 17.

At North Wheal Basset meeting, on Wednesday (the Rev. C. Clinton in the chair), the accounts showed—Advance on tribute, 360l.; copper ore sold, September, 1424l. 11s. 1d.; October, 1806l. 12s. 6d.=3591l. 7s. 5d.—Balance last audit, 162l. 9s. 5d.; mine cost, merchants' bills, &c., Sept., 1255l. 19s. 7d.; Oct., 1454l. 14s. 3d.; advance on tribute, 280l. 1s. leaving credit balance, 438l. 14s. 2d. There was a profit on the two months' working of 609l. 13s. 7d. The estimate of assets over liabilities was 681l. 12s. 1d. Captain T. Glanville reported that in the 132 cross-cut, north of the flat-roof shaft, the south lode had been intersected, which was 3 ft. wide, composed of spar, intermixed with copper ore, and as the lode at this point was dividing the granite and killas, it was thought they would again have a deposit of ore.

At St. Austell Consols general meeting, on Tuesday (Mr. S. Barker in the chair), the accounts showed—Balance from last account, 863l. 5s. 5d.; calls received, 1405l. 13s. 7d.; received for black tin, 3812l. 15s. 1d.; received for copper ore and carriage, 39l. 6s. 4d.; received for uranium, 21l. 14s.; received for arsenic, 27l. 9s. 9d.=6168l. 4s. 2d.—Mines cost, merchants' bills, and lords' dues, 5967l. 5s. 2d.; leaving in hand, 200l. 19s. The estimated assets for three months amounted to 3139l. 17s. 10d., and the liabilities to 4599l. 9s. 10d. A call of 5s. per share was made.

At West Alfred Consols meeting, on Dec. 18 (Mr. G. A. Ashton in the chair), the accounts showed—Balance last audit, 843l. 0s. 5d.; mine cost, August and Sept., 776l. 15s.; merchants' bills, 331l. 6s. 5d.; sundries, 59l. 8s. 5d.=2010l. 10s. 3d.—Calls, 480l. 10s. 8d.; copper ore sold (less lords' dues, 25l. 7s. 6d.), 583l. 12s. 4d.; iron, 26l.; leaving debit balance, 560l. 7s. 3d. A call of 10s. 11d. per share was made, and the committee of management were re-elected. Capt. S. Lean and R. Stevens reported that the prospects, on the whole, were considerably improved. The south wall of the lode in the 55 had been cut, and the ore pit was 4 ft. wide, and 25 ft. per fm.

At the Wheal Sidney meeting, on Wednesday (Mr. E. S. Codd in the chair), the accounts showed—Balance last audit, 232l. 12s. 3d.; tin sold, 41l. 7s. 4d.; call, 33l.; tin sampled, 800l.; 1099l. 19s. 7d.—Mines cost, Oct., 274l. 19s. 8d.; Nov., 293l. 17s. 3d.; merchants' bills, 229l. 8s. 8d.; Dues, 60l. 15s. 6d.; leaving credit balance, 246l. 18s. 6d. It was resolved that the 159 shares in arrears of call be forfeited, unless the same be paid within 21 days. The committee of management were re-elected. The tin which at last meeting was estimated at 1199l. had realised 1131l. 7s. 4d. Capt. W. Edwards reported that the engine-shaft was down 25 fathoms. There was at surface, unstamped, tinstuff which probably would give about 7 tons black tin. The prospects of the mine continued to be encouraging.

At Wheal Wrey Consols meeting, on Tuesday (Mr. Peter Clymo in the chair), the accounts showed—Balance last audit, 724l. 12s. 8d.; mine cost, July, 986l. 1s. 1d.; August, 985l. 0s. 8d.; September, 980l. 11s. 11d.=3676l. 6s. 4d.—Ores sold, 2502l. 7s. 7d.; call received, 922l. 5s. 5d.; leaving debit balance, 231l. 13s. 9d. A call of 2s. 6d. per share was made, payable forthwith. Capt. P. Clymo, W. Hancock, and R. Roskilly reported that the engine-shaft had been sunk 10 fms. under the 74, and they thought to intersect the lode at an 84 fm. level before next meeting. The pitches were producing much as usual. They sampled on the 20th inst. a parcel of lead ore, computed 42 tons, for sale on the 28th inst.

At the Abbey Consols special meeting, on Wednesday, convened for the purpose of considering the necessity of disposing of or forfeiting all shares in arrears of call, prior to forming the company under the Limited Liability Act, it was resolved that the question of such forfeiture be referred to the finance committee.

At the Huckworthy Bridge adjourned meeting, on Dec. 13 (Mr. John Pearce in the chair), it was resolved that the 678 shares in arrears of call, amounting to 88l. 15s., subject to forfeiture in accordance with the rules and regulations by which the mine is carried on, be restored to their respective holders upon payment of the arrears thereon within 21 days. Mr. H. G. Sharp was appointed secretary pro tem., at a salary of 4 guineas per month, the appointment to be confirmed or otherwise at the ensuing general meeting. The services of the purser and captain it was agreed should be dispensed with at the end of the present year, and during the absence of employment for them caused by change of machinery. The report stated that the work underground had been confined to one lode, from which an adit had been driven at about 60 fms. About 20 fms. behind the present end of this level an engine-shaft was being sunk on the course of the lode, and was now about 11 fms. below the level. The shaft was in a good position for the development of the mine. The lode was about 3 to 4 ft. wide, and yielding good stones of copper ore.

At the Nanteos and Penrhwy Mining Company meeting, on Tuesday (Mr. W. Stuart in the chair), it was agreed that as the calls on the shares forfeited on Dec. 8 had been tendered to the secretary, that such shares be disposed of by restoring them to the respective holders. The report of Capt. J. Roach was considered of an encouraging character. The wheel-pit had been finished, and the wheel was in course of erection. The house for the crusher was being built, and all the other work connected with the dressing-floors was in progress.

At the Wheal Zion special meeting, on Tuesday, it was resolved that in the opinion of the meeting it is desirable to sell the mine, machinery, and materials thereon, and that the committee be, and are hereby, authorised to effect such sale on the terms and in the manner as may appear to them most advantageous to the company. There was a debit balance of 788l. 12s. 10d.

At Carvath United Mines meeting, on Saturday (Mr. Cundy in the chair), the accounts showed a credit balance of 593l. 11s. 5d. The balance of liabilities over assets was 388l. 1s. 10d. A call of 10s. per share was made, payable in two instalments. It was determined to vigorously prosecute the development of the mines, and the improvement recently manifested warranted the hope of success after the mines have been properly opened. The committee of management were re-elected, with the addition of Mr. Mackean. A detailed report of the proceedings is in another column.

In Caradon Consols account, last week, the liabilities of the mine are stated at £4167. 9s., whereas they should have been £4467. 9s. only.

At Rosie and Canada Mine meeting, yesterday (Mr. W. Cox, M.P., in the chair), it was resolved that the company should be dissolved, and its affairs wound-up; and that the directors be authorised to sell the machinery, plant, and stock in America, at such price or prices as may be desired. This project commenced its operations in 1856; its mines are situated in the St. Lawrence county, state of New York. Mr. Wm. Trelease, under whose superintendence the works were placed, prosecuted considerable works in the Rosie Mine, and partially opened the Victoria Mine, and in November last Mr. Henry Thomas, for many years connected with the Victoria Mines, surveyed the company's property, and advised the vigorous development of the Victoria Mine, as he considered it a fair and legitimate speculation, and deserving the application of capital. With regard to the Rosie Mine, he recommended the prosecution of certain works, provided the company's capital admitted of such works being pursued. Although considerable quantities of ore have been raised, at the assayed average of 80 per cent., and the expenses attending the smelting are small, up to the present time the costs have far exceeded the returns. It was resolved some few months since to issue the allotted shares, in order to raise additional capital, to enable the company to pursue the works advised by the above-named gentleman, and Mr. William Thorne, the company's mining manager in London. These allotted shares, however, were not taken up by the public, so that it now becomes a question whether the company will still further pursue the development of these mines, which, it is stated, warrants the hope of eventual success, or relinquish their undertaking, and sell the plant, buildings, machinery, &c.

In Foreign Mine Shares, during the past week there has been a fair amount of business doing, especially in the shares of the St. John del Rey, which have risen in a most remarkable manner, the closing quotation being 14½ to 15, at which price they are in great request. Cobre Copper are in good demand, and have risen 1l., the present price being 40 to 42, at which they are firmly held. The Fortuna report of the 13th inst. states that during the month of November 218 tons of lead ore had been weighed at the smelting-works, and they estimate the raisings for December at 240 tons; the surface operations are progressing favourably; the shares are quoted 1 to 1½. In the Allen and Quenagen Company's report of Nov. 15, it is stated that at Rajas they have effected a communication between the shaft and the workings under the surface, and the stuff being brought to surface at much less expense than formerly; the lode has increased in size, yielding more ore than all the other workings put together; the other mines continue much the same as last reported; the shares are quoted at 3. In Marigutta shares but very little has been doing, and the price remains without alteration. Port Phillip shares are quiet, at ½ to ¾. Linares have been in request, at 7½ to 8½. The shares of the North Rhine Copper Mining Company of South Australia continue to be freely dealt in at ¼ prem. United Mexican have been in demand, at ¼ to 2½; General, 20 to 21; New Granada, ½, ¼; Copiapo, 10 to 12; Bon Accord have been dealt in at 12s. 6d.; Dun Mountain, ½ to ¾.

From Leeds, our correspondents (Messrs. Gledhill and Co.) state that the mining market still continues quiet, many shares being offered, but not much business done. The Craven Moor Mining Company have been smelting a large quantity of lead in a common non-smelting-mill. The Merryfield Mining Company are now raising a considerable quantity of ore. They have also had lead smelted at Mr. York's new smelting-mill. This is encouraging, and so far satisfactory. It would have been more agreeable to have had to report that they had each paid a dividend. Nothing short of bringing the mines to a paying state can restore and inspire confidence in mining.

GOVERNMENT SCHOOL OF MINES.—The lectures terminated on Wednesday for the Christmas vacation. They will re-commence on Monday, Jan. 10.

MUSEUM OF ECONOMIC GEOLOGY.—In consequence of the absence in Scotland of Prof. Ramsay, the next course of lectures to working men will be delivered by Mr. Warrington Smyth; these will be on Mining.

KING'S COLLEGE.—The examination on Mineralogy, by Prof. Tennant, took place Dec. 18. The subject of the examination paper was the principal characters of quartz, form of the crystal, fracture, hardness, action of acids, and the blowpipe. The students were required to name some of the substances which it will readily scratch; the difference between the chemical composition of opal and quartz; the general form of the garnet, and in what rocks it is chiefly found; the difference between mica and talc; the distinguishing properties of augite and hornblende; the structure of felspar; the means of distinguishing sandstones from limestones; the principal characters of calcareous spar; the form obtained by cleavage, hardness, action of acid, and the blowpipe; the minerals representing the scale of hardness; and the crystalline forms to be obtained by cleavage from fluor-spar. A variety of minerals were described by the students, upwards of 40 of whom attended the examination. The lectures recommence on Jan. 28.

ROYAL ACADEMY, WOOLWICH.—The recent examination of the cadets in Geology and Mineralogy treated of stratification; the division of rocks, and the characters of each group; the aid afforded to the geologist by the study of organic remains in determining the relative age of stratified deposits; the formations below the carboniferous deposits, and the fossils peculiar to them; the fossils to be considered as decisive in determining sedimentary deposits; the examination of a foreign country, with regard to rendering the knowledge acquired useful to more experienced geologists at home; some of the practical advantages of a knowledge of geology and mineralogy; the crystalline form, fracture, hardness, and specific gravity of topaz, quartz, fluor-spar, felspar, and garnet; the principal minerals which enter into the composition of crystalline rocks; and the distinguishing characters of sandstone and limestone. The cadets were examined by Prof. Tennant, of King's College.

RUSSIAN SHEET-IRON.—Mr. Wells, in his recent work—"Principles and Applications of Chemistry," states that Russian sheet-iron is a very pure article, rendered exceedingly tough and flexible by refining and annealing. Its bright, glossy surface is partially a silicate and partially oxide of iron, and is produced by passing the hot sheet, moistened with a solution of wood ashes, through polished steel rollers.

IRON MANUFACTURE.—All interested in the make or use of iron should read Mr. Rogers's new work on *Iron Metallurgy*.—"I do not hesitate to say Mr. Rogers's work is the most complete combination of sound science and sound practice that has yet appeared on Iron—beyond comparison."—DAVID MURRAY. Published at the Mining Journal's office, 26, Fleet-street.

NORTH WALES MINING DISTRICT.—The coal trade remains tolerably brisk in the Wrexham district. The iron trade in that district is also flourishing. In the neighbourhood of Ruabon matters are decidedly looking up, and confident anticipations are formed of a good winter trade. The business in coal is very brisk; the men are fully employed, and are earning good wages. At Acrefair some excellent orders for iron have been received, which, it is anticipated, will keep those extensive works in active operation for a considerable time to come. At Rhosymedre the freestone trade is prosperous and active.

CARELESSNESS OF A MINER.—At the Ashton-under-Lyne County Sessions, on Wednesday, John Higby, employed at the Colliery of Messrs. Wilde and Co., Barlley, near Ashton (the pit where 40 lives were lost by a recent explosion), was charged with having directed a lad over whom he had control to go to the pit mouth with a lighted lamp, a distance of 300 yards, the gauge of which lamp had been broken by a pick, by which he endangered the lives of many men, and a great destruction of property. The rules were put in; and the magistrates' clerk said the fine was not exceeding 5l.—The defendant pleaded guilty, and said it was an oversight.—Mr. J. Harrop said that the defendant must know that it was most unsafe, and that he ought to have immediately blown the lamp out; observing that it might have been expected he would have been more cautious, as he had been burned at the late explosion, and had also lost a boy. It appeared that the gauge had been broken accidentally whilst getting "cotton coal," and that the defendant had immediately ordered the lad to take it to the pit mouth, and hold his thumb over the hole; and, under the circumstances, the Bench directed him to pay costs; Mr. Harrop warning the defendant to be more cautious, and pointing out to him that had there been gas in the pit at the time a fearful explosion must have been the result of his carelessness.

At the Calcutta and South-Eastern Railway Company meeting, held yesterday at the London Tavern, Bishopgate-street (Mr. J. Borradaile in the chair), the resolutions passed at a previous meeting were severally and respectively confirmed. Mr. J. Anderson read the notice convening the meeting. The Chairman stated that the Calcutta and South-Eastern Railway was limited to about 30 miles, and would not, therefore, be affected by any unprofitable extension. It would take from 1½ to 2½ years to construct. He thought that the chances of competition were very remote, and the prospect of remuneration beyond the 5 per cent. guaranteed would not appear chargeable with exaggeration, when it was remembered that Col. Baker reported the proposed railway to be easy of construction, and calculated to pay 10 per cent. The means of traffic were based upon the present local traffic, which would be considerably increased, inasmuch as the railway would pass through a densely populated country. The chief revenue would be derived from the transport of cargo to and from Calcutta. The traffic was so great that the canals were utterly inadequate to its conveyance. The local traffic exceeded 1,500,000 tons.

At the European and American Steam Shipping Company meeting, on Thursday, Mr. R. W. Crawford, M.P., the Chairman, stated that he had no desire to see the company dissolved; on the contrary, he wished to see it prosperously conducted, but could not perceive any chance of this while the management remained in the hands of Messrs. Crooke and Co. This firm admitted that they owed 5000l. to the company, and he believed that a considerable sum would be shown to be due were the affairs of the undertaking wound-up. Of the two courses open to them, one was to borrow money, and the other to accede to Messrs. Crooke's terms. The Chairman, having announced that he was ready to resign, together with the rest of the board, a resolution was passed in favour of carrying on the undertaking under a new board of directors, to be elected by the shareholders.

WEEKLY DIARY.

TUESDAY	.....	Penden Consols	.....	London Tavern—at 1.	
		Great Wheel Busy	.....	27, Austinfriars—at 2.	
		North Pool	.....	On the Mine.	
WEDNESDAY	.....	Dale	.....	London Tavern—at 1.	
THURSDAY	.....	Wheal Arthur	.....	2, Crown-court, Thirdered-street—at 2.	
		Wheal Edward	.....	27, Austinfriars—at 2.	
		Wendron Consols	.....	On the Mine.	
FRIDAY	.....	Sortridge Consols	.....	London Tavern—at 1.	

Secretaries and pursers will oblige by forwarding notices of forthcoming meetings.

LEAD ORES.

Mines.	Tons.	Price per ton.	Purchasers.
Harwood	6	£12 19 6	W. L. Cookson & Co.
Nether Heath	8	12 7 6	Washington Chem. Co.
Sold on December 18.			
Dyngwyn	27	13 6	Walker, Parker, & Co.
Rhoswydd	19	13 1	ditto
South Garrae	60	18 5 6	R. Michell & Son.
Sold on December 20.			
Fronchog	128	14 0	Faulter Lead Co.
East Daren	54	16 3 6	Newton, Keates, & Co.
ditto	28	15 11 6	Walker, Parker, & Co.
Goginan	37	17 10 0	Newton, Keates, & Co.
Cwm Erfin	13	16 12 6	ditto
	40	16 15 0	ditto
Sold on December 22.			
Foxdale	100	15 11 6	Walker, Parker, & Co.
Wheal Exmouth	85	13 17 6	Locke Blackett, & Co.
ditto	50	9 1 0	Sims, Williams, & Co.
Wheal Frank Mills	65	9 12 0	Newton, Keates, & Co.
Sold on December 23.			
Westminster	45	13 12 6	Walker, Parker, & Co.
Maesysafn	80	19 7 6	Adam Eytton
Mount Pleasant	30	14 2 6	Courage & Co.
ditto	30	14 2 6	Walker, Parker, & Co.
East Pant Dul	25	13 7 6	Courage & Co.
Minera Union	50	14 0	Newton, Keates, & Co.
Raglan	3	13 15 6	Walker, Parker, & Co.

BLACK TIN.

Sold on December 16.					
	Tons c. q. lbs.	Price per ton.		Amount.	Purchasers.
Trevenen and	2 10 3 24	£74	10 0	£ 189 16 10	Enthoven & Sons.
Tremenheere	0 11 1 19	66	0 0	37 13 8	ditto
ditto	0 3 1 17	40	0 0	6 16 0	ditto
Sold on December 22.					
Pedra-an-drea	2 11 0 27	76	0 0	194 14 3	Daubuz & Co.
ditto	8 2 1 21	69	0 0	560 8 2	ditto
ditto	2 19 2 18	59	0 0	175 19 11	ditto

THE PROGRESS OF MINING IN 1857, BEING THE FOURTEENTH ANNUAL REVIEW.

By J. Y. WATSON, F.G.S., Author of the *Compendium of British Mining* (published in 1843), *Gleanings among Mines and Miners*, &c.

The FOURTEENTH ANNUAL REVIEW OF MINING PROGRESS appeared in a SUPPLEMENTAL SHEET to the MINING JOURNAL of Jan. 3, 1858.

A FEW COPIES OF THE REVIEW OF 1855, containing Statistics of the Metal Trade, the Dividends and Percentages Paid by British and Foreign Mining Companies, and the State and Prospects of upwards of 200 Mines. Also a FEW COPIES OF THE REVIEW OF 1852, 1853, and 1854, MAY BE HAD on application at Messrs. WATSON and CUELL'S Mining offices, 1, St. Michael's-alley, Cornhill, London.

Also, STATISTICS OF THE MINING INTEREST. By W. H. CUELL.

WATSON AND CUELL'S MINING CIRCULAR, published every Thursday morning, price 6d. or 4s. 1s. per annum, contains Special Reports of Mines, and the latest Intelligence from the Mining Districts, from an exclusive resident agent; also, Special Recommendations and Advice upon all subjects connected with Mining, and interesting to investors and speculators. A Record of Daily Transactions in the Share Market, Metal Sales, and General Share Lists, &c. Edited by J. Y. WATSON, F.G.S., and published by WATSON and CUELL, 1, St. Michael's-alley, Cornhill.

N.B. Looking at the causes for the present depression in mining shares, Messrs. WATSON and CUELL have made a selection of a few dividend and progressive mines to pay good interest, with a probability, also, of a rise in value, the names and particulars of which will be furnished on application.

INVESTMENTS IN BRITISH MINES.—MR. MURCHISON'S REVIEW OF BRITISH MINING for the QUARTER ENDING 30th Sept., 1858, with Particulars of the principal Dividend and Progressive Mines, Table of the Dividends Paid in the last Three Years, &c., and a SPECIAL REPORT ON TOLVADEN MINE, by Capt. CHARLES THOMAS, IS NOW READY. Price One Shilling, at 117, Bishopsgate-street Within, London.

Reliable information and advice will at any time be given on application. Also, COPIES OF "BRITISH MINES CONSIDERED AS AN INVESTMENT." By J. H. MURCHISON, Esq., F.G.S., F.S.S. Pp. 356, boards, price 3s. 6d., by post 4s. See advertisement in another column.

CORNISH COPPER MINING ENTERPRISE, 1850 TO 1st MAY, 1858, INCLUSIVE. By R. TREDENNICK, Mining Engineer and Share Dealer, 4, Austerlitz, London. 1000 copies only are published, price bound 5s. per copy. Early application, to guard against disappointment, is earnestly requested.—Communications to be addressed to the Editor of the *Mining Journal*, 26, Fleet-street, London.

IS MINING FOR METALLIC ORES A LEGITIMATE AND PROFITABLE CHANNEL FOR INVESTMENT? OR IS IT NOT? By JOHN ROBERTSON, Esq.

May be had gratis on application, either personally or by letter, at his offices, 3, Finner's-court, Old Broad-street, London, E.C.

THE JOINT-STOCK ACTS OF 1856, 1857, 1858, and the BANKING ACTS OF 1857, 1858, with Notes, Forms, References, Full Information, all the Legal Decisions, and Copious Index. By THOMAS HUGH MARSHALL, Esq., M.A., Barrister at Law of the Inner Temple. London: Andrew Robertson, 29, Chancery-lane.

ADCOCK'S ENGINEERS' POCKET BOOK for 1859, for the Use of Engineers, Architects, Surveyors, Directors, Contractors, Mechanics, and Clerks of Works, containing, together with a Ruled Diary and the usual information of an Annual Vade Mecum, highly valuable Tables and Formulae, Elementary Treatises on Practical and Scientific Subjects, specially adapted to casual reference, and Original and Valuable Papers on Vulcanised India-rubber, Burnt Clay Ballast, Artesian Wells, Electro-telegraphy, &c., with Illustrations on Copper. London: Simpkin, Marshall, and Co., sold by G. and R. W. Hebert, 88, Cheapside; and by all booksellers.

HANDBOOK OF RAILWAY LAW: Just published, price 10s. 6d., crown 8vo., A. Containing the Public General Railway Acts, from 1825 to 1858 inclusive, and Statutes connected therewith; with an Introduction, containing Statistical and Financial Information, &c.; Notes, Forms, and a copious Analytical Index. By ARTHUR MOORE, Esq., Secretary of the Dublin and Wicklow and Kingstown Railways; author of *Compendium of Irish Poor Law*, &c. W. H. Smith and Son, 186, Strand, London, and Luckwall, Dublin; Bradshaw and Blacklock, Manchester.

Notices to Correspondents.

•• Much inconvenience having arisen, in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

MANUFACTURE OF IRON AND STEEL.—In your notice of the samples of ore-bloom metal, which I forwarded to the *Mining Journal* office last week, you have termed them "Ore-bloom Steel." This is an error, as they are not steel, but are soft homogeneous iron. Since "One Interested" has discovered that my processes have been anticipated by others, and are, therefore, either valueless or, at all events, superfluous, may be he proposed to constitute one of the "Steely Triumvirate?"—ROBERT MCGIBB: *Coledale, Dec. 23.*

MANUFACTURE OF STEEL.—In consequence of your notice in last week's *Journal*, I have tested the ore bloom steel made by Mr. Musket's process, and find its quality to be excellent. If it be made from ordinary British coke pig-iron, I am convinced that it must come into general use. Being aware that there is always much difficulty in introducing new inventions in England, I would suggest that the French market be tried, and believe that if offered in Paris at the price Mr. Musket advertises it here, with the simple addition of freight and duty, it would be a highly remunerative speculation.—PARSIAN: *City, Dec. 21.*

SOUTH ESCOTIE MINING COMPANY.—In the report of the company's meeting, which appeared in last week's *Journal*, in answer to a question, Mr. Thornthwaite appears to nullify the apparent tangible hypothesis which has been promulgated in certain quarters that the mines of this company are, *de facto*, extinct volcanoes—that is to say, if your reporter has rightly rendered his answer. It were presumption on my part to doubt the scientific acquirements of that gentleman, but it really seems there is more geological datum than these mines are real extinct volcanoes than that they are not. Perhaps, Sir, among your numerous scientific readers there will be some important information in connection with the district wherein these mines are located.—P. A.: *Dec. 22.*

COLLECTION OF FOSSILS.—Perhaps you may deem the following of sufficient interest to entitle it to a place in your *Journal*:—A friend, just returned from Belgium, informed me that the rare fossil and mineral collections of the distinguished André Dumont, late Geological Professor and Rector of the University of Liege, is to be disposed of. It consists, I am assured, of no less than 21,700 specimens, many of them of great beauty; all revised and classified by Dumont himself. The opportunity is an unusual one, and well worthy the attention of such of the scientific institutions of our large cities as may be desirous either of forming new collections or of enriching already existing ones.—GEOLOGIST: *Paris, Dec. 17.*

BEST ROOT PAPER.—A paragraph from your *Journal*, relating to this article, was published in nearly all the London and provincial papers, a circumstance which I consider proved that the invention was of great value and certainly a cheap paper, possessing all the good qualities of the glycerine paper, would meet a ready sale. Yet carefully as I have watched for the announcement of the invention having proved successful upon practical trial, I find no further mention of it. Can you, or any of your correspondents, inform me whether Dr. Collyer is making any progress, or, if he is not, what is the cause of his delay in bringing his invention before the public? Money is plentiful now, and if that be the sole requisite for ensuring his success, he would find plenty of capitalists both able and willing to assist him by subscribing a definite sum, provided they were secured against further liability. From what I understand, the difference of price would be equal to repaying the paper duty, and as so much is said about this repeal, all must admit that the introduction of best root paper would be one step in the way of—PROGRESS: *Manchester, Dec. 20.*

WHEAL ZION.—By reference to last week's *Journal*, I perceive that a special meeting is to be called for Tuesday, in order to determine on the sale of the mine, machinery, &c. I had hoped that when the Glebe land was purchased a turn in our fortunes would have taken place. We were told by the agent that there was every prospect of improvement. The mine, I see, is no longer in the Share List. I trust the sale of the property will realise sufficient to discharge the liabilities, and that there will be no necessity for further call. It must be acknowledged that several of the shareholders in this mine have exercised great patience, and followed the management in all its peregrinations from Bath through various offices. A run of ill luck appears, however, to have followed us, although we have been several times near the attainment of fortune. In November, 1857, the improvement that then took place nearly all interested imagined would be lasting. There was a rise in the shares at that time. We were deceived in prognostications, and now may fairly anticipate that with the close of the present year Wheal Zion will exist but in name.—R. H.

MINING INSPECTION.—As far as regards the public, it appears in many cases there is no great faith to be placed in reports, however well-qualified the parties may be who make them. The San Fernando de Cuba was inspected by Prof. Atsted. No one will venture to doubt either his honesty or capability, and yet we see how unfortunately this has turned out. He has practice, sound judgment, and has given to the world several able works treating of his profession. In this instance we have an educated gentleman of great proficiency being deceived. On the other hand, we often see persons who have not the slightest qualifications for the task they undertake obtaining the ear of the public, push projects which by a lucky hit occasionally answer, and bring repute to the self-dubbed inspector. In my opinion, though practical authorities are the greatest guide, every one should, to a certain extent, consult their own common senses to any undertaking they may embark in, and ascertain whether there are any probabilities of success. A recent trial in the Court of Queen's Bench informed us how an Inspector of nuisances and a druggist could be transmogrified into a civil engineer, mine inspector, and land surveyor. But this, it must be remembered, was under particular circumstances, and associated with a man who it was believed at one period turned all he touched to gold, although the revelations of the Bankruptcy Court have since told us it all belonged to other people. The great damage done to mining appears to me to be this—that when all legitimate business fails there are many people who turn their attention to mining as a dernier resort; and if they either have to visit Basinghall-street or Portugal-street, it looks well in their schedule to attribute their losses to mining adventures. It is fresh in the memory of all the failure of the house engaged in the China Trade for 300,000. Before the Commission it was stated this was owing to mining speculation, when, on reference to the schedule, it was proved that only the comparatively insignificant sum of 2300, had been invested in mining shares, many of these being at the time available assets. Owing to this, and several other extraneous circumstances, much undeserved reproach has been thrown upon our mineral enterprise. It would be as well that the public should know who are the real Simon Pures, or who are the counterfeits. If mining were left alone to miners and those connected with it, and no interlopers allowed to interfere, or if when they did so were unmasked, as a profession it would take a much higher rank, and obtain that reputation which its importance deserves.—MOL.

PATENT PROCEEDINGS.—Next March it will be two years since Mr. Robert Oxland, of Plymouth, stated he would forward to the *Mining Journal* a description of his patent process for the purpose of extracting wolfram from tin. In a recent *Journal* I perceive he again reiterates his promise. I trust that he will not this time be so long in its fulfilment.—STUDENT: *Jersey-street.*

LEVANT MINERAL COMPANY.—I perceive in your last *Journal* that this company is omitted from the Share List. Although not much I believe has lately been done in shares, as there are comparatively few holders, yet the company are still raising money at Saxo. It is to be regretted that the directors have not further developed the vast resources, which, according to their first prospectus, they stated they were about to do. They may be probably over cautious; but if so, this an error on the safe side, and at their next meeting they will, I have no doubt, be able to render a faithful and satisfactory account of their stewardship.—DEMETERUS.

"B. E." (Birmingham).—The only copper mine of importance in Sweden is that of Falun, which it is stated is the oldest in Europe: there are traditions of its existing over 1000 years. Swedish iron is principally manufactured from magnetic ore. All the iron is bound to go through the Jarn Verks Control. In order to protect the smaller mines it must be sold at a certain price, which is fixed by that establishment. The steel principally used for manufacturing fine cutlery is obtained from Dapvenora. At Gellivara and Swappavara there are likewise iron-works, but as they lay near the Gulf of Tornea, and in inclement latitudes, they are but partially worked. Attempts have been made to prosecute silver, lead, and copper lodes in the province of Dalecarlia, but owing to want of capital these have not been taken up. Two are, however, working—that of Sahla for silver-lead, and the Dalecarlia. This last was opened a few years since by an English company, of which the late Mr. John Duncan was the solicitor. It was, however, abandoned by them, but is in full operation by a Swedish association, who are returning profits.

TYNARHALL.—I perceive by a notice in the *Journal* of last week that this mine has sampled 104 tons of good quality copper ore. In my previous communications I have stated to you the good reports which the mine has always had in the vicinity. We may now hope that the mine will be prosecuted with energy. Had this been done last year at the time it was taken up the parties who then intended to work it, it would have been in a better position. It is now again fairly at work; let us hope that it will continue to be so, and of advantage to both the employers and employed.—D. J.

GOLD REDUCTION.—I cannot conceive, unless it be to fritter away the remaining capital, what is the utility of waiting for further advice from California, or what that has to do with Mr. Squire's process. The directors are perfectly aware that they cannot expect any more favourable results from Mr. Attwood. It was in the month of July that Mr. Squire first offered his process to the directors. Col. Kennedy bore testimony to its practicability, having seen it tested at Walworth; so did Mr. J. H. Clement. The only person who appeared to doubt its efficacy was Mr. John Arthur Phillips. We were then told nothing could be done until Oct. 6. Two months have now elapsed since that period, and nothing definite has as yet been settled. It does appear to me, in all good mining companies the presiding genius of the managements, both at home and abroad, has been procrastination. Surely there must be a termination to these vexatious delays. It appears that hitherto, as far as the shareholders know, there are no liabilities. Let them at the next meeting see that something definite is arrived at. The Anglo-Californian Gold Mining Company, after they had expended all the capital, incurred liabilities to the amount of 16,000. The shareholders are now called upon to pay 3s. per share in order to discharge these, although when the scrip was issued it was stated that the 10s. was paid up, and no further liability to be incurred. *Verbum sat.*—PRESBYTER: *Bromley.*

THE GOLD QUESTION.—An "Old Smelter" alludes to the probability of the revival of the gold question. If such is to be the case, which Heaven forbid, at least let us have some progress, and not a repetition of the theoretical wanderings which not long since emanated from the delusions of the several alchemists, who were as chimerical as their predecessors. These, however, had this merit in pursuit of a shadow. They elucidated some great chemical facts, which were useful to science. The present have never yet made any observation worth preserving.—GRUMBLER.

WHEAL GRATES.—The point mooted in this company as to whether after a mine is in the Statutory Court the secretary is empowered to make calls is one of great importance to the mining community at large, and the sooner it is decided by some competent judicial authority the better. I am aware in this instance that both the conflicting parties state they are acting under legal advice. Doctors differ, and lawyers disagree, and, therefore, bystanders have only to look to the decision of the judge. Mr. Berry at one period was the solicitor of Mr. Jeffrey; I perceive now that he is acting for the shareholders. If the secretary has advanced money for the legitimate purpose of the mine he ought to be reimbursed. I do not, however, think that he should be the arbitrator in his own case. If he conceive, however, that he has right on his side, the question had better be tried at once; one suit would determine who was in the wrong. The terms of the law would not be held over the heads of the shareholders, and by this simple means we should arrive at a true definition of the powers of the Statutory Court. Whatever that might be, it would be hailed with satisfaction by all parties, especially as it would involve a final settlement of this tangled skein.—H. S.: *Thredwell-street.*

WHEAL ENMA CROSS-COURSE.—I have frequently seen my name mixed up with a certain controversy respecting a cross-course on the Wheal Enma estate. As I write my reports from actual observation, I think any one who refers to that on the Enma Mine (published in the *Journal* at the time it was made), will find that I stated a cross-course did exist, and I described what I saw. A party at the time made some severe remarks on the report, and attempted to insinuate that I had not been in the mine at all, or, if there, the survey must have been a very superficial one, as the number of wheels on the mine were stated incorrectly. To this I replied, that if the party did not know how to read I knew how to write correctly. But to this late question, whether a cross-course existed or not, I never thought it worth while to trouble you; this I know, when I was there a cross-course did exist, and I saw it. I am glad to find your report justifies my views of the matter formed at the time, as well as my anticipation of the productiveness of Wheal Enma in the deeper levels.—GEOFFREY HENWOOD: *Dec. 21.*

LADY BERTHA.—This mine has again had various inspections by several agents—Capt. Gifford, of Crebor; Capt. Richard Bunt, of Devon Great Consols; Capt. W. Mitchell, of London; and many others. The agent's time must be nearly occupied by attending to so many inspectors. The difference in the reports of the various agents being so great has attracted much attention. I know Capt. Clemo, of Devon Great Consols, to be a man of man of strict honour and integrity, and would not lend his name to an untruthful report, but still there may be an error of judgment. As a shareholder I should, therefore, suggest, for the sake of Capt. Clemo, and giving Capt. Jas. Matherell fair play, that a disinterested man be called in, and his report sent to the *Journal*.—FAIR PLAY.

EAST WHEAL RUSSELL.—This matter, so far as we are concerned, terminated in our last *Journal*. To do justice to the numerous communications we have received would require a Supplement devoted to the purpose; but, as we consider that no good end could be served, we have resolved on omitting all reference to the matters in question, *pro et con*.

LADY BERTHA.—I think if "A Miner" (Carmarthen) would only take up your valuable *Journal* every week he would have no occasion to ask what length we carry Cartel's winze. He can refer to the columns of British Mines, dated Nov. 6.—J. METIERELL.

* With the MINING JOURNAL of Dec. 4 we gave a SUPPLEMENTAL SHEET, which contains—Dr. Hyde Clarke's paper "On Copper Smelting," read at the Society of Arts; Notes on Metals and Mining—No. IV.; Cornish Mine Photographs—"Refractory Market Day;" Cornish Mining Maxims; Forest of Dean—No. II.; Mineral Legislation in France; Waterford and Kilkenny Railway; The Iron Trade in Sussex; London to America in 110 Days—Iron Shipbuilding on the Tyne; Railways in Spain, &c.

Now preparing.

THE PROGRESS OF MINING IN 1858.

By J. Y. WATSON, Esq., F.G.S.,
BEING THE FIFTEENTH ANNUAL REVIEW.

And will be published in a SUPPLEMENTAL SHEET to the MINING JOURNAL of Jan. 1, 1859.

It being the object to make the Annual Resumé as perfect as possible, agents and pursers will oblige by forwarding, either to Mr. WATSON, St. Michael's-alley, Cornhill, or to the *Journal* office, a brief account of their mines, with any other particulars they may possess, to be embodied. We court information, and shall gladly avail of all that is communicated.

THE MINING JOURNAL Railway and Commercial Gazette.

LONDON, DECEMBER 25, 1858.

An obstinate adherence to any principle the fallacy of which is daily proved would be, according to the rules of common sense, an evidence of perverseness and folly calculated to attract upon just and tenable grounds the character of ordinary individuals. What, then, shall be said of extraordinary people, who vaunt them of the highest order of intelligence, and yet would assert their possession of the attribute by circumscribing its action, narrowing judgment to fatuity, and rendering perspicuity blindness? This anomaly, however, does exist, and might possibly be bearable—a mere matter of commiseration—so long as the persons creating it were the only sufferers; but when their sin of willfulness is visited upon a community, and the commerce of a country flags and fails under the baneful influence, it is high time to assail the evil, and arrest its progress.

The ironmasters of France have, unfortunately for the trade of that country, rendered themselves obnoxious to everything which should be said and done against the supporters of an evil system, and the promoters of a selfish and short-sighted policy. Acting in concert, they had sufficient weight with the Government to prevent the renewal of the October decrees, which admitted Belgian and English iron almost duty free, under the stipulation that it should be re-exported in the manufactured state. Their plea, however, although thus successful, is now proved a fallacy, and looks, it must be allowed, very like a deliberate and wilful fabrication. The allegation upon which they mainly depended,—that the protective provision of the decrees was evaded, and a large amount of the foreign manufactured iron absorbed into the home trade—is, *prima facie*, as unfounded an assertion as ever emanated from a commercial body. Nor is it extenuated by the fact

that a political character was infused into their argument against all interference with the monopoly they have so long misused, to the extent that it alone enables them to employ a large body of people, who, if out of work, would become turbulent, and dangerously antagonistic to authority; and this they lost no opportunity of impressing on the Imperial Government. It failed not in effect; for such a representation was, it may well be conceived, the true secret of their recent successful opposition to that principle of free trade to which the Emperor is known to lean. This local tranquillity is, they aver, too necessary to the maintenance of the powers that be, to be risked even for the general commercial prosperity of the country, and they would thus uphold "prohibition" as the palladium of the empire; but as is so frequently the case where unscrupulous and interested persons plead their own cause, they have proved too much, and the Customs' returns cannot fail to show the Protectionists in power, if any there really be, how egregiously they have been practised on and deceived. With the mere political bearings of the question we have nothing to do. It is with a great national industry, injured and oppressed, we sympathise; because we would see the mining interest, taken in its widest sense, untrammelled and untrammelled, believing it to be in every country a great element of peace and prosperity, and an impetus to science the most practical and useful. Let us now see what prohibition has effected for our neighbours. The importation of pig-iron last month amounted to 9238 tons against 10,292 in Nov., 1857, and 11,179 in the corresponding month, of 1856. The returns show 1684 tons were exported during the last month against 4416 in the corresponding month of last year, and against 6276 in that of the preceding year. Copper imports fell during the year from 1472 to 1210 tons; lead from 2285 to 1196 tons; and zinc from 2782 to 1262 tons.

These statistics prove a general decline of the metal trade, and I probably constitute a pretty fair indicator of the general effect of restrictive laws on the entire commerce of France. One thing they prove, taking the gradual decrease of the iron imports into consideration, that the allegation as to the non re-exportation of the manufactured British and Belgian iron admitted under the October decree is false in every particular. The decline in iron and the other mineral imports, can only be attributed to the general decadence of the trade and commerce of the country under this protective policy. That the sympathies of the industrial classes in France are not with protection there can be little doubt, and that the labouring population ally themselves cordially to those who, upon liberal grounds, and under a fair business system, employ them, our columns this day record a generous and acceptable proof.

There is nothing conduces more to bring right-minded and thinking men to the grave consideration of a subject than an equivocal course of conduct on the part of its advocates or opposers, and such a course having been notoriously pursued up to the present point by the protectionists in France, a spirit of enquiry is excited, which it will for the future be vain for them to attempt suppressing. On all sides the political economists are on the *qui vive*; the Customs' returns form the pabulum of a more determined antagonism than the Protectionists have had yet to encounter; their acts recoil upon themselves, and their misrepresentations, now detected, will do more to increase the number of free traders than would have done any advocacy they could have mustered. In the adoption of a liberal tariff by the French Government we do not pretend to deny that our own iron trade is essentially interested, nor less the other branches of our mining industry.

In Belgium the non-renewal of the decrees has been severely felt, for a more liberal policy was speculated upon, and engagements upon a considerably extensive scale, we understand, were entered into. This will, of course, fall heavily on some of the manufacturers, and it cannot fail to have, at this season particularly, an unfavourable effect on the trade in general. In the meantime, as good not unfrequently comes out of evil, some hope may be cherished that a fair foreign competition being once permitted by our allies, an enduring commerce will be established, which will compensate for any losses sustained by manufacturers under the existing system of protection. No nation can afford to render the cost of production in iron manufacture so high as that standard which the French ironmasters would maintain is vitally necessary to their welfare. Iron enters too extensively into every species of fixture which science in its most important phases embraces to admit of any very long adhesion to protective duties respecting it by a country like France, where the national industry is so dependent on variety of invention, and manufacture is divided and subdivided almost infinitely through its most populous districts.

The late oration to an English gentleman, Mr. RICHARD TAYLOR, representative of the house of Messrs. JOHN TAYLOR and SONS, well and favourably known to the mining interest of England, by the authorities, chief inhabitants, and mining population of the town and canton of Pontgibaud, where Mr. TAYLOR has achieved a most successful mining enterprise, is a pleasing evidence of the good will which "fair play" in mining is calculated to inspire, and stands a proof to all that the free intercourse of the industrial interests is the best center of peoples, and the great consolidator of the peace and well-being of the whole human race. The French are as generous as well as chivalric nation; quick to resent an injury, they are eminently susceptible of kindness and fair treatment at the hands of those who direct their energies towards the development of the vast resources their country is possessed of. They know how to appreciate the worth and integrity inherent in the English character, and they freely reciprocate good feeling. Mr. TAYLOR has, as we have seen, received a very graceful acknowledgment of his services; and pointing to him as a man who, a type of his country, fosters industry upon a free, liberal, and enlightened principle, we say to the iron-oligarchy of France, who have defended for a time a policy wisely conceived, and have injured the trade of the country—Go you and do likewise.

There is much which deserves especial consideration in the communication on the explosion at Tyblesley Colliery, which appeared in our last *Journal*. Without attaching more importance than it deserves to the somewhat crotchety notion entertained by the Newcastle Institution of Mining Engineers as to the best mode of working coal, "the established principle of safety," as laid down by our valued correspondent, is unexceptionably good, and we heartily desire the universal adoption of these excellent suggestions. But there is nothing new in this principle, or in the five rules of conducting mines, which were known and recommended long before the concentrated wisdom of the North was centred in the Newcastle Institution of Mining Engineers. Could the Institution devise some means by which the practice could be assimilated to this principle, it would do much towards the prevention of accidents in mines, and would have a better claim to originality as regards the results of its discussions than it has yet established. Eight or ten years ago, we hoped that this would have been accomplished by a system of inspection, but our columns have recently borne evidence of the lamentable disappointment that has ensued from a long experience of the working of the Inspection Act; and this failure we have repeatedly shown is attributable more, if not altogether, to the inefficient administration of the law than to any defect in the law itself, save the absence of some controlling and superintending power to direct the labours of the Inspectors, and to see that their duties are properly and energetically performed.

The communication of our able and experienced correspondent confirms and strengthens our convictions of the truth of what we have said, and of the absolute necessity there is for some such amendment of the Act as we have proposed. He says: "There is a very incredible fact, which is but too often exemplified, that in many cases of prominent danger from explosions, bursting in of water, falls of roof, bad ropes, imperfect gearing, &c., which were well understood by the intelligent portion of the workmen, yet they had not got the moral courage to raise their voices and demand an investigation." Again we say there is nothing new in this—it always was so, and we fear it will always continue to be so. But was not this urged as one of the strongest arguments for inspection, and was it not from the well-known absence of moral courage in the workmen to complain that inspection was instituted?

Were the mines properly inspected the workmen would have no cause of complaint. After eight years of inspection it reflects great discredit on the officers of the Crown that such a state of things in our collieries should continue in all its pristine and fearful danger.

After the occurrence of a fatal accident we find the Inspectors, with some honourable exceptions, rushing to the Police Offices, and expending their energies in convicting the owners and managers under the penal provisions of the Act; and, as in the Cyfing Colliery case, meting a poor, ignorant labouring man, like THOMAS, the agent, in 20*l.* fine and 28*l.* expenses; whereas, if, as we have before shown, had the Inspector done his duty it is probable the accident would not have happened. In such cases one would think a consciousness of implication would restrain a gentleman from pressing too severely on one whose incompetency was more in fault than his wilful neglect of ordinary duties. This, however, is a matter of taste,

and the Inspectors, doubtless, believe that by thus striking terror into the hearts of these poor men they are best promoting the object sought to be accomplished by their appointment. It may serve to divert the attention of the public from the real cause of the accident, but among those ostensibly to be benefitted by such an example it creates only disgust and indignation. In cases where accidents occur after inspection, in which advice has been contumaciously rejected, and, after due remonstrance, the provisions of the Act have been utterly disregarded, by all means have recourse to the penalties of the Act to enforce obedience, and to maintain the supremacy of the law. Such conduct would be in true accordance with the spirit and intention of the Act, and would meet with the approval of the public, as well as the respectful submission of the miners themselves. What we want is more inspection, not penalties; more instruction as to what is wrong, not the punishment of it; and, in short, the prevention of accidents. Until we have more frequent inspection the Act cannot be said to have been fairly tried, and it will be useless to attempt amending it, except as we have suggested, unless it be fairly and vigorously carried into execution. How long we shall have to wait until all the coal mines in Great Britain participate in the benefits conferred by this Act it is difficult even to guess, for if the dignified inactivity of our gentlemanly officials is to continue in fashion, another eight years may elapse before we see any diminution of the thousand lives now annually sacrificed in our coal mines. We hope for better things; we trust that the Inspectors may be roused into greater activity; and, above all, we hope that Parliament will make a searching enquiry into the working of the Act, and provide efficient remedies for its administrative defects.

The able and useful statistics collated annually by Mr. ROBERT HUNT, and published under the auspices of the Geological Survey of Great Britain, and the Museum of Practical Geology, demonstrate the importance of the mineral industry of the United Kingdom. Previous to the publication of these memoirs an approximation was all that could be arrived at. The information then obtained was chiefly given, and from it no definite results could be arrived at. For a considerable period, although the greatest mineral-producing country of the world, we possessed no records of our progress, and while the increase of every other species of industry was noted, that of minerals and metals was entirely neglected, and it was a matter of surprise to all foreigners that Government took no cognizance of one of the most important sources of wealth to the British empire.

Our tin mines are of great antiquity. Lead, it is known, was smelted here in the time of the Romans, and several pigs of that metal of the time of the earlier emperors may be seen in the British Museum. Within the last few years the humble Museum located in an obscure corner in Craig's-court has found a fitting and more suitable location in Jernyn-street, and the pupils of that establishment who have passed their examination are already doing good service in various quarters of the globe. It is but comparatively recent that Government Inspectors have been appointed to supervise coal mines. These have shown their utility, although it is to be regretted that they are not more numerous, as it must be self-evident that in each district there are a greater number of collieries to superintend than is possible for one Inspector to accomplish, however talented he may be.

The Government School of Mines has proved of great utility, and probably would be better attended were it not for the expense entailed upon the country students by a residence in the metropolis. This, however, cannot be avoided, as such an establishment must be central, in order to obtain the most talented men available as teachers. We may express a hope that at no distant period those who have received their education there will be enabled to diffuse the knowledge so acquired in less famed localities. The district school established at Bristol is now of some importance; and north of the Tweed our neighbours are now bestirring themselves to erect a similar academy in the West of Scotland. These are favourable indications of the desire of the miners to become better educated. These schools are, however, mainly for colliers, and consequently principally treat of the subjects concerned with coal mines.

An attempt was made to establish a district school in Cornwall for metallic miners, and this we know, unfortunately, during the present year has failed from want of support from those for whose benefit it was principally intended. We are not about here to analyse the causes which have led to this deplorable result. We can only regret it, and trust that the day is not far distant when the advantages to be derived from such an establishment will be more fully appreciated in the Duchy of Cornwall.

It has been stated—we know not with what truth—that many of the failures which have arisen in foreign mines, where Cornishmen have been employed, is attributable to their obstinate prejudice in working there without reference to locality or other circumstances, they merely imagining that the same system as pursued in Cornwall should be followed out in other places. It is well known that lodes in their characteristics greatly differ in various districts, and it is, therefore, a great advantage to the metallic miner that he should know how, and under what circumstances, these changes occur. He ought, at the same time, to have such a knowledge of ores as to enable him to distinguish the several minerals which may be comprised in them. Their separation ought to be considered as well as their utilisation. A knowledge of surveying and dialling should not be neglected: these are some of the principal points. We have merely alluded to them here in order to show the desirability of our Cornish miners acquiring such information.

There appears now to be every inclination on the part of all connected with collieries to forward the cause of education; and we trust that those interested in metallic mining, despite the failures that have occurred, and the opposition that has been encountered, will not relax in their endeavours, but strenuously try to re-establish some educational establishment for metallic miners in a locality where its utility may be available to all who are interested. It is not for us to point out how this desideratum is to be arrived at; this must be left to circumstances, and will greatly depend upon the support to be obtained from the miners and those who are concerned in the prosecution of mines. The present year is now nearly expired, and no one can foresee what the ensuing may bring forth. During the past period the cause of education, with but the exception referred to, has progressed; and we can only express a hope that it will not retrograde, but advance steadily, so that our metallic miners will no longer have the reproach of being less willing to acquire knowledge than their compereers.

Among the few continental States that offer a secure and profitable investment for mining capital, Piedmont deserves to take high rank, not only from the nature and character of the Government, but also on account of the diversified and extraordinary mineral wealth its soil contains. In the Alpine glens, and amid the range of hills, Nature has accumulated in abundance nearly all the metals—at least, all that are most prized for manufacturing purposes; and within the same district, not exceeding many acres in extent, may be found iron, copper, zinc, and silver-lead. To the Romans, Piedmont was the chief source of supply of metals, but, notwithstanding their workings, they may be said to have done little more than remove the surface deposits, leaving intact the richest and most important veins and lodes.

The Valley del'Arc is perhaps the richest of all. It abounds with iron ore of that quality which is the most highly esteemed—spathe ore. The steel manufacturers in the French department of the Isere, are compelled to employ it, and so necessary is it to them, that although they are the staunchest of Protectionists, they have induced the French Government to make an exceptional reduction in the import duties upon the steel pig-iron produce in the valley of the Arc. The analysis, by BERTHIER, shows the ore to contain for 100 parts—Protoxide of iron, 50; manganese, 8; magnesia, 0.7; lime, 1.7; carbonic acid, 38; gangue, 1. The quantity of ore in this district has been estimated by the eminent French mining engineer, M. PERUDET, at 2,570,000 tons.

After the iron ore, the most important mineral deposit is that of copper. It is found in the form of pyrites, associated with the iron ore, in masses of from 10 to 15 metres long, 5 to 10 metres wide, and 1½ metres thick. Consequently, although found in the iron workings, the copper pyrites are not intermixed with the iron ore, and there is no necessity for the tedious operation of sorting. The pyrites contain 22 per cent. of copper; and in one portion of the district the copper ore is found alone, of an average richness of 35 per cent.

The lead ore, or galena, which has been analysed by M. BONNEVILLE, assayer to the Bank of France, gave 35 per cent. of lead, and 30 grammes of silver to the 100 kilogrammes.

The calamine has never been worked at, although its abundance and richness have been fully recognised.

An important element of success in working the mines of the valley of the Arc is the presence of excellent anthracite, close to the mines, which M.

ELIE DE BEAUMONT designated *Terrain Anthracifere des Alpes*. There is also an abundant and cheap supply of charcoal and water-power, valued at 450 horse-power, while the Victor Emmanuel Railway passes over the mines. This property belongs to M. le Comte de CHATEAUNEUF, who holds it by a direct grant from the Crown through the family of the Prince de CARIGNAN before they ascended the throne; and who, we are glad to learn, is making arrangements for working the mine with the aid of English capital and English engineers. The present imperfectly-worked mines and furnaces return, we are informed, a net income of 8000*l.*, which will secure upwards of 10 per cent. upon the amount of capital to be raised, while out of this amount a considerable portion will remain available to increase the efficiency of the means of exploration, from which it is calculated will result an interest of not less than 20 per cent.

The scheme is presented under the most favourable auspices. A certain income of 10 per cent., which admits of being doubled, and is most favourably regarded by the Sardinian Government as an important means of developing the resources of that portion of the country. The most influential Members of the Sardinian Parliament are among the directors, including the General Count SONNAZ, late Governor of Turin, and M. COLLOMB, Governor of the Bank of Savoy, at Chambéry.

Our Australian colonies are repeating their demands for the employment of British capital in their respective sources of production. Victoria has recently explained its requirements in this respect for the construction of railways to open up the traffic of the colony, and asks for about 8,000,000*l.* sterling, looking chiefly to this country for a response to her demand, and now South Australia expresses the necessity of having extraneous money support even for ordinary commercial enterprise, but especially to develop the extraordinary mineral riches within her territory, and which are shown to be greater than were originally supposed by the arrival of almost every mail from Adelaide. On this interesting, and, indeed, very important subject, the local press, well as much length, and we cannot better explain the wishes of the colonists than by transcribing some remarks on this head from the *Adelaide Register*. That journal, in its number of Oct. 11, the latest date to hand, says:—

The great source of wealth to which we have so frequently called attention is now beginning to be more fully developed. The mines of the colony only await the employment of capital and labour to increase our exports in the article of copper, tin, and to furnish an ample market within our own province for the produce of the agriculturist and the stockowner. It is necessary, however, that we should be aided by English capital to work our mines; and we call once more the attention of our friends in England, and of capitalists generally, to the importance of this colony as a field for mining enterprise. It is proved by every test short of actually bringing the ore to the surface, that the northern portions of the colony are rich to repletion in ores of copper. Mineral leases may be obtained from the Government on extremely favourable terms. Enterprising individuals are already reaping rich harvests under this arrangement, and the facts of the case require only to be known to induce many others to adventure in this field of labour. What is wanted is the formation of a few working companies, to lay bare the treasures of the earth and to diffuse them and their results throughout the colony. It is difficult to conceive a finer opening than exists in this department of industry for remunerative return to judicious investors. We should lament to see anything like a mining mania here, but it is a pity to allow sources of wealth unutilised to remain closed almost at our doors. One of the most serious drawbacks in the way of our rapid progress in this respect is the want of sufficient capital for the most ordinary occupations. This is partly the result of the extension of our business without a corresponding increase in our stocks of the circulating medium. With money at an average value of 15 per cent. per annum, it is evident that an enterprise must be extremely profitable to tempt the capitalist to embark in it, or to warrant men of smaller means to involve themselves in debt in the pursuit of wealth. A very large number of operations of an industrial kind, which might be carried on profitably if money were obtainable at easier rates, are thus wholly checked. The capital of the banks in the colony is completely inadequate to the legitimate demands of trade.

THE GOLD QUESTION—IRELAND.

The question of whether gold, either in streams or in the quartz matrices, does really exist in paying quantities seems now likely to be fairly put to the test; at all events, the grant for certain rights in Ireland has been obtained from the Government, and the sum which it, as well as the Duchy offices, requires by way of assurance of the *bona fides* of the promoters has been paid. The dues are extremely liberal; we have heard the amount, as well as the sum laid down as a guarantee, but we think it would be out of our province to publish them.

It is known the Irish gold mines when worked last, sixty years since, were productive of considerable quantities of the precious metal in the metallic state. Many large personal ornaments have from time to time been found constructed from gold, evidently by a primitive race. These would seem to corroborate the idea, or rather tradition, that gold was in ancient times obtained in large amounts: since that period as much improvement has been made in gold mining as probably in any branch of the mining profession. An "Old Californian," who visited the spot, soon found the much-prized metal, and a little further exploration decided on the measures to which we allude. The fact is beginning to render landlords more alive to the value of their mineral property in the sister island than they were wont. We trust the apathy hitherto displayed by these gentry will be reversed, and their doubts dispelled.

In a recent Journal we inserted an urgent appeal in favour of the Irish mining properties, and stated our conviction that it only required the energy and example of a few individuals of known business habits and standing in society to set the matter afloat in its true bearings, and thus to ensure success. We rejoice to be enabled to announce that a company, with a maximum capital of 50,000*l.*, has been formed without difficulty. The promoters purpose expending a certain sum themselves in developing the mines ere they throw the shares open to the public, and call up the whole of the capital. The sum named by the engineers as requisite for these works has been readily furnished. As it will take many years to wholly explore these extensive mines, they only propose to call up the gross capital as may be required. This mode of procedure is certainly a very wise one, bespeaking, as it does, a degree of caution, calculation, and self-confidence it would be well for many mining companies to adopt.

One of the crying evils against mining, and certainly one of the most legitimate of its grievances, is that projects are launched into the market without due consideration, and worked, or attempted to be worked, with inadequate capital: both are equally culpable.

If anything is to be gathered from surface appearances, or from the products of the mine as far as already operated on, or from the proximity to mines of world-wide celebrity, no doubt can exist of their productiveness and remunerative state long ere the time for calling up anything like the capital shall have arrived. We understand the whole of the proprietary are Irish gentlemen. We truly wish them God speed in their undertaking, and hope it may prove but the earnest of a great work that may, and probably will, conduce to the welfare of that now most certainly rapidly-improving section of the British empire.

Since the above was written, we learn, from good authority, another Irish mining company is on the tapis. The samples of ore we have seen are of the finest quality, and several tons have been procured at an insignificant depth, beneath a vast and splendid gossan. We shall continue to watch the progress of these undertakings with great interest, as we feel and know they will be productive of real and permanent good, not only to Ireland itself, but to the nation at large.

MANUFACTURE OF OIL.—A novel mode of applying the heated products of the combustion of fuel directly to the body intended to be decomposed, whereby the heat of the burning fuel commences chemical changes, resulting in the production of oil, while the heat disengaged in the changes is added to that arising from the fuel, has been patented by Mr. Hiram Hyde, of Truro, Nova Scotia. By his process the undue elevation of temperature at the moment of decomposition is prevented, layer after layer of the body being subjected to heat in succession at the lowest possible temperature, instead of the whole mass under treatment being simultaneously heated to the point of decomposition. In carrying out the distillatory process, a brick cylinder is employed to receive the charge to be operated on; and at the bottom of this cylinder a grate, or pierced plate, is provided. Below the grate is a cavity, which is connected by a channel to a well, or cistern, intended to receive the tar as the charge is decomposed. The tar cistern is closed by an air-tight cover, and it is provided with a dip-tube through which the tar may be pumped out, while an inverted syphon prevents the filling of the tar cistern above its extremity. A draft-pipe passing out of the tar cistern leads to a worm condenser, which has a dip-pipe with a diaphragm to separate the fluid from the gaseous products. Projecting into the draft-pipe is a jet-pipe and valve for the admission of high-pressure steam, which is used to create a down-draft through the grate into the tar cistern, thence along the draft-pipe, and through the condenser to the atmosphere. Supposing canal coal is the substance to be decomposed, the brick cylinder is filled with moderate-sized fragments to near the top, and on the coal dry coke is evenly spread,

and over this again is laid ignited coke. The steam-jet being now set in action, and a down draft produced, the operation of forming oil will quickly commence. This oil, in vapour, with other bodies, will descend through the grate into the cavity below, and passing thence will be mostly condensed in the tar cistern. Any light oily, or watery vapours, with gases, will pass through the draft-pipe and enter the cooled condenser, whence the condensable products will be discharged at one point, and the gases, washed by jets of cold water, will escape at another.

NORTHAMPTONSHIRE IRON.—The development of the ore of this county progresses slowly, but with unerring steps. There is no question but the time is near at hand when the demand for Northamptonshire ironstone will be very large and general. We understand it is probable that a third furnace will be erected at Heyford early next year, and other iron ore works and furnaces are about to be proceeded with. An excellent and very rich deposit of stone is about to be brought into the market at Cooknoe, a village near Northampton. A siding is being made with the London and North-Western Railway, and sometime next month ore will be sent away from this place. The Gayton Stone Works are brisk, we learn, and large quantities of ore are daily being sent away from these works. The pigs made at Heyford are largely in demand, and almost any quantity could readily be disposed of.

NEW TIPPING APPARATUS.—An improved contrivance for preventing the great depreciation in the value of coal which usually arises from breakage in loading and unloading, has recently been introduced by Messrs. A. and J. Rigg, of Chester. It is too well known that under ordinary circumstances the breakage is immense, and when it is considered that small coal fetches but about one-fourth the price of the lumps, the importance of the invention will be readily understood. The advantages possessed by the machine are obtained by the use of a rotating scoop, combined with a very peculiarly constructed break arrangement, the whole being mounted upon turned axles and strong standards with brass bushes. The truck, as raised from the pit, is placed upon the table of the apparatus, and there firmly held, and by the simple release of a catch the whole apparatus, with the coals upon it, begins to move, and owing to the great friction upon the break wheel by the exertion of a very slight force on the part of the attendant, the machine may be made to rotate at any desired speed. The sides of the scoop prevent the coals falling over, and the rotation continuing, the inclination of the front plate increases until it is such that the coals do not fall, but slide forward, and are thus delivered upon the main screen or guide, and laid, not thrown, direct upon the railway or other conveyance. When the restoration of the machine to receive another load is required, the man at the break, by closing his hand upon its handle, withdraws a holding-down catch, and without any manual labour whatever the apparatus restores itself ready for another load. The whole contrivance being simple, quick in its action, strong and durable, it would seem fully entitled to general adoption.

THE MINING AND INDUSTRIAL INTERESTS OF CORNWALL.

[FROM OUR CORRESPONDENT IN WEST CORNWALL.]

DEC. 23.—The Christmas season is a festive, not a business time, and therefore we shall probably find for the next week or two that mining share business will be comparatively neglected. But the new year will open with excellent prospects for mining;—the price of metals on the advance; trade reviving at home, and also in some of the foreign markets; several of the dividend and progressive mines looking better; and money in such abundance in the market as to justify the expectation that a considerable amount of it will be applied to mining investments.

The paper by Mr. Hyde Clarke, "On Copper Smelting," read at the Society of Arts (published in the *Mining Journal*, Dec. 4), has again drawn the attention of mining people to copper smelting; and the question is asked—What should prevent the mines from smelting their own ores? Coals can now be conveyed from Wales to Cornwall at a very low freight; there is much less expense in that conveyance than there was formerly. The profit on copper smelting, according to Mr. Low, is enormous; 40*l.*, he says, upon every ton of fine copper, after paying all charges. It has always been believed in Cornwall that the profits are very large; but it was not supposed that they were so high as 40*l.* upon every ton of fine copper. The price of best selected is now 110*l.* per ton; if the profit be 40*l.* upon every ton sold, it is no matter for surprise that enormous wealth is accumulated by copper smelting. With regard, however, to the mines smelting their own ores, it has always been said that a sufficient combination would never take place among mine-adventurers to effect that purpose. And probably such would be found the case in practice. So large a body of mine shareholders are constantly buying and selling, whenever they can get a chance of making profit, that it would be useless to expect such persons to join in a compact and settled partnership for the smelting of ores. But what should prevent the larger dividend mines joining together (they having, generally speaking, a more settled list of shareholders) for smelting their own ores, and the ores of contiguous mines, if such a scheme should be thought profitable? It can scarcely be supposed that sufficient capital would be difficult to obtain.

The capital for the projected Falmouth Docks is set down at 300,000*l.*; about 30,000*l.* has been subscribed at Falmouth, and as to the remainder, it is said there is a certainty of its being forthcoming. If 300,000*l.* can be raised for the Falmouth Docks, could not 150,000*l.* be raised for a Cornwall smelting company? Still, considerable difficulties exist in the way of such a project. The copper trade is a difficult one to manage, and a company composed of a few capitalists would be likely to have an advantage over a larger smelting association. That copper smelting, however, as well as tin, could be profitably conducted in Cornwall, hardly admits of a doubt. A fact was mentioned in the Journal of last week which bears upon this point. The Elbe Copper Works, near Hamburg, are successfully carried on. The coals to supply them come from Newcastle and Sunderland, and the copper ores for smelting come from South America, paying high freights. If, against such disadvantages, these works are profitable, what should hinder similar works being profitable in Cornwall, close to the mines? For the present, however, the miners do not seem to have much reason to complain of the price that is given for their ores. Trade has been in a very low state for a long time, and in consequence the price of copper has been low to the manufacturer. But the smelters have been giving for some time an unusually high price for ores—that is, the price has been unusually high in comparison with the selling price of smelted copper. They have their own reasons for pursuing this peculiar course at the present time. The result, however, is that the miner gets a good price for his ore; and if there were what is sometimes called an independent miners' smelting company in the field, the miner would hardly get a better price for his ores than he does now.

The further advance this week in the price of copper has the effect of giving increased firmness to the shares of copper mines; and tin mines generally are also likely to advance in value, from the upward tendency of the metal market. Wheal Basset is looking rather better at one or two points. At East Basset, the lode in the 80 is worth from 8*l.* to 9*l.* per fm. The winze and stopes in the 60 give an excellent prospect of there being a long extent of ore ground in the 80. The United Mines are looking well, and will continue to produce large samplings; the sale next week will be a large one, consisting of 775 tons of ore. The Hot lode, both in this and Wheal Clifford, continues to be exceedingly productive, though difficult and expensive to work. South Frances shares are from 230*l.* to 235*l.* North Frances has a prospect of doing better in the 70. At Penstruthal, a call of 16*l.* per share has been made; the prospects are encouraging, and it is to be hoped the adventurers will be rewarded for their perseverance, as they have been, after a large outlay, in East Basset. At Boiling Well, although the accounts are still against the adventurers, there is every prospect, from the appearance of the lode in the shaft, that a good mine will be found at greater depth. The present levels are evidently too shallow to discover any very considerable body of ore. At Botallack meeting a dividend of 2*l.* 19*s.* per share was declared, and upwards of 2000*l.* carried to next account. In the St. Agnes district, Wheal Ellen has a good lode in the 40 east and west. Wheal Budnick (lead) is looking well, and shares have lately considerably advanced. North Treskerby is intended to be worked with vigour, and the prospects appear to be good. North Downs was formerly a rich mine, having sold about 130,000*l.* worth of copper ore, and the mine, it is reported, is about to be resumed. There are also other new mines named, which a period of mining activity will probably bring into notice next year.

At Redruth, last week, Mr. Richard Pearce, of the Mining School, delivered a lecture, with chemical experiments; and it is intended to form a chemical class in connection with the Redruth Mutual Improvement Society

which it is hoped will prove of benefit to the members and others in that mining locality. If chemical classes could be formed in each of the mining districts they would, no doubt, be very useful.

THE IRON AND METAL TRADES OF STAFFORDSHIRE.

[FROM OUR CORRESPONDENT AT WOLVERHAMPTON.]

DEC. 23.—The Iron Trade presents a decidedly improved aspect. The American advances continue to be more favourable, and, generally, there is a better demand, and indications of a return to a state of steady activity. Pig-iron is very firm. Contracts for delivery in the early part of next quarter have, in some cases, been entered into at a slight advance, and there is a general impression that before these contracts expire an increased demand for manufactured iron will enable the makers of pig-iron to secure a further advance.

The Coal Trade is rather more active. The active spirits in the late strike are endeavouring to promote a Union amongst the colliers here, and to affiliate with the miners in the North of England. They take care to report their meetings; but as no statement has yet appeared as to the number that have joined, it is probable that the adhesions are not numerous.

In the Hardware Trades no particular change to notice, except a slight falling off in the orders, as the result of Christmas approaching. The advance in copper on Saturday was expected, and afforded no, or very slight, indication of the state of trade, as the peculiar constitution of the smelting body permits of the action of the laws of supply and demand being so greatly interfered with. The inconvenience of constant changes in the prices of copper and tin to manufacturers and merchants is great.

A very sad accident, of a kind of too common occurrence in South Staffordshire, occurred last week at Tipton. A sinker was working in a shaft, and called out "Go on!" as a signal to the engineer; this was repeated by the banksman, and the engineer proceeded to raise the chain. "Go on!" is the ordinary signal when only material is being sent up; "Coming up" being called when persons are about to ascend. The engineer, G. Edwards, supposing that only dirt was coming up, having to "fire" himself, went to look at the grate as the engine was winding. The man himself, however, came up; the banksman on seeing the token on the chain called to the engineer to stop, but the latter could not do so in time. The poor fellow, seeing his danger, called to the banksman to push the runner over the pit's mouth, but this was placed on the side of the shaft near the engine, so that had he done so the bowk would probably have fallen upon him. The deceased gradually got outside the bowk, clinging to it; and just as it reached the pulley, sprang off on the edge of the shaft, but, either from rebounding or overbalancing, fell into the pit and was killed. The jury returned a verdict of "Manslaughter" against Edwards, the engineer, and expressed their disapprobation at the manner being so placed that in such a case it was most perilous to do that on which the safety of the man ascending depended—to cover the pit's mouth. No doubt the carelessness of the deceased in not indicating that he was coming up was in a great degree the cause of the accident.

The glass-makers at Stourbridge still continue on strike, and the dispute with their masters appears to be rather embittered than otherwise.

At Birmingham, on Thursday, a meeting of manufacturers and merchants was held to memorialise the Government to repeal the paper duties. It was stated that paper to the amount of 30,000*l.* is annually consumed in Birmingham. The special grievance complained of in relation to the trade of that town was that French and German makers of paper buttons, paying no duty, competed with the Birmingham makers, who were saddled with the duty, in addition to which the price of paper was enhanced by the interference which Excise regulations caused in its manufacture. A resolution in favour of preparing and forwarding a memorial to the Government was unanimously agreed to.

REPORT FROM YORKSHIRE, DERBYSHIRE, AND LANCASHIRE.

[FROM OUR CORRESPONDENT IN CHESTERFIELD.]

DEC. 23.—The advent of Christmas has turned the attention of everybody to the festivities of the season, and the heart must really be sad indeed that could not be merry at this period of the year. The trade, which appears to be improving steadily, will, as the lawyers say, remain in *statu quo* until after the holidays, and the present aspect of things points to excursions, friendly visits, huge plum-puddings, and festive gatherings of all descriptions for the approaching Christmas. It is a mistake to suppose that the miner is indifferent about the celebration of Christmas, or that he is unprovided with roast beef and plum-pudding, and many other of the good things of this world. We fear, however, that the recent strikes will seriously affect the domestic comforts of the miners in South Yorkshire, and several other districts, but we hope the present will prove a lesson not easily to be forgotten. We are glad to observe that a subscription has been made in Leeds to provide a fund to enable the colliers' wives to have a tea party, and to enjoy the festivities of the season, as well as to celebrate the termination of the strike.

The Coal Trade is exceedingly good, and prices are very well maintained. All the collieries are very fully employed, and orders are abundantly plentiful. It is expected that the Duke of Newcastle's new colliery at Workop will be down in the spring of next year upwards of 560 yards, to the top hard coal of Derbyshire or Barnsley bed. The collieries of the Midland Counties will, it is supposed, yield about a quarter of a million tons of coals more this year than last. Up to the present time we have much pleasure in recording that no fatal explosions of fire-damp have occurred, and we sincerely hope that this may be the case for years to come. It can only be accomplished by vigilance on the part of managers, and care and attention on the part of the workmen. We have no means at present of ascertaining the number of deaths in coal mines in the Midland Counties, but, judging from the reported cases, they are considerably less than in 1857. From many sources we hear favourable accounts of the operation of the Coal Mines Inspection Act; and no doubt its very salutary clauses, and the energy and care of proprietors and managers, have done much to reduce the loss of life. The collieries of the Midland Counties are becoming less dangerous daily, and it is very satisfactory to notice that the accidents decrease.

The directors of the Mill Dam Mining Company met at the mine on Friday last, to make arrangements preparatory to the erection of an engine. Mr. Davey, of the firm of Davey Brothers, engineers, Sheffield, attended, and was instructed to forward an estimate of the cost of an engine of about 13 horse-power, so as to test the mine. The new shaft has been sunk about 37 fathoms, and this week the tenders for walling the shaft are to be sent in. It is anticipated that the new shaft will be ready for the engine in March next, and a vigorous effort will be made to have the engine erected by that time. The plans for the reservoir, engine-house, &c., will shortly be prepared, and commenced at a very early date.

We hear that some good ore has been raised from the shaft of the Peak Forest Mine.

The works at the North Derbyshire Mine are progressing satisfactorily, and the engine will be finished early in the new year.

On Monday an inquest was held at Bradbury, near Stockport, on the bodies of two colliers who were killed at the Bradbury Mine, on Saturday, occasioned by a jerk from the engine. Verdicts of "Accidental Death" were returned, and it is intended to take proceedings before the magistrates against the engine-driver.

REPORT FROM NORTHUMBERLAND AND DURHAM.

[FROM OUR CORRESPONDENT.]

DEC. 23.—The Coal and Iron Trades here continue to be somewhat depressed, at any rate they cannot be reported as active or brisk, generally speaking; there are, however, many exceptions to this, depending on the nature of the coal, &c., produced—for instance, at some collieries producing gas coal exclusively the demand cannot be met at present.

Considerable exertions have been made for some time here, as well as in other districts of the country, to introduce the use of raw coal for locomotives, instead of coke. The high price of coke, of course, renders this a great desideratum. It is, indeed, a subject of much importance, and those attempts have met with success in some instances. The Broomhill coal, produced from a colliery near Warkworth, being situated at the northern limit of this coal field, is highly spoken of for this purpose—little smoke being produced in experiments lately made on the North-Eastern Railway with this coal. We must notice also, in connection with this subject, that Mr. G. W. Jeffery, of the Hartlepool Iron-works, states that "The boilers recently constructed at those works for marine purposes has demonstrated the fact that North Country coal is more economical than Welsh

coal; and, also, that the former can be consumed without smoke in the ordinary working of the furnaces even by foreign firemen, for the first time on board, when steam was up." This, then, further confirms the numerous reports that have been made to the same effect on the subject, and we have no doubt whatever that the experiments about to be made in Wales with that coal will fully confirm these reports, and settle the point to the satisfaction of all. The consumption of the smoke is a point far too little attended to; it is really surprising the little progress that has been made in effecting this, notwithstanding the numerous experiments that have been made fully demonstrating its practicability.

Considerable difficulty is still met with from water at the Hebburn Colliery, and the pits can only be worked four days per week. The large engine erecting for the purpose of drawing the water is, however, in a state of forwardness, and it is expected to be got to work in a few weeks, when their position will be much improved. The Oakwellgate Colliery, and one of the pits in the Tyne Main Colliery, it will be recollected, stopped by the water rising in the Low Main seam, nearly a year ago. It is understood that an attempt is to be made shortly to rid those pits of the water, and get them to work again.

A meeting of pitmen was held near Crook on Saturday. The weather was intensely cold, and the attendance thin. The speakers advocated the cause of the Union; but it appears by their remarks that it is not making much progress. This, we submit, shows that, generally speaking, the men see no necessity for such a thing. It would be well if all the coalowners would remove any cause of dissatisfaction among the men on account of deficient ventilation in their collieries. One of the speakers stated that he had worked two years in a pit where no bricks were sent down to make the stoppings for conveying the air into the workings, the result of which negligence was that the candle would not burn in the workings, thus making it extremely injurious to the health of the workmen employed. The Government Inspectors ought to look to these matters. We cannot suppose that the owners of the colliery would allow such a state of things were it brought before their notice.

A dreadful accident took place on the Hetton Colliery Railway on Monday last, the boiler of a locomotive engine having burst, killing instantaneously one man and a boy, and severely injuring three others. The engine was a very old one, being the oldest on the line. The railway plates were torn up for some distance and broken to pieces, and several persons slightly injured.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

[FROM OUR CORRESPONDENT IN SOUTH WALES.]

DEC. 22.—The situation of the Iron Trade remains favourable, and since our last the arrival of several fresh orders has given increased confidence to the ironmasters. Slackness is now felt only in particular neighbourhoods, and even in these but partially, while briskness, generally speaking, characterises the principal works. From America the demand is becoming more animated, but it is from France and Russia that the chief foreign enquiry proceeds. The peculiar circumstances connected with the iron trade in the former country, to which reference has frequently been made in these columns, are highly conducive to the interests of English makers, and those of South Wales derive a large advantage from them. The new lines of railway now being constructed necessitate a constant and considerable supply of material, and no small portion of it is furnished from this district. The Tredegar Works are extensively engaged in orders of this description, and at Ebbw Vale the transactions are also on a large scale. At Nant-y-Glo an excellent trade is being done, and from Blaenau similar good reports reach us.

The Coal Trade continues steady, but it is not particularly brisk. Some large vessels have been loading within the past few days, and steam coal meets a ready sale.

On the whole, it must be acknowledged that our position is vastly more promising than at the corresponding period of last year. We were then just entering on a time of great danger, and serious disasters befel many of our firms. The strikes at the commencement of the year aggravated previous misfortunes, and placed more than one house in an extremely perilous position. So sound, however, are the principles and the basis on which the ironmasters seem to be acting, that no firm of any consideration fell, and the only concern to which public attention has been directed is one in the Forest of Dean. The storm did not commit the ravages which might reasonably have been feared, and we can now look forward, we trust, with confidence to a year of great and general prosperity. Something more than mere indications of it have already appeared, and there is every reason to suppose that enterprise and speculation will be more active in 1859 than we have witnessed for many previous years.

The Aberaman estate, Glamorganshire, has often been examined, with the view of finding the No. 3 vein of bituminous coal, but prior to the present time without success. Mr. Crawshaw Bailey, M.P., the proprietor, instructed his surveyor, Mr. W. Lewis, about two months ago, to make another effort, and surveys and levelings were accordingly taken. A pit 30 yards deep was sunk, and the vein referred to was "proved" most satisfactorily. Some of the coal was tried in the Aberaman ovens, and the coke produced was equal to the best make in the Rhondda Valley. No slag, or pyrites, we learn has yet been found in the coal. It is supposed that about 350 acres of the mineral are in the property on the spot here referred to.

The experiments relative to Welsh and North Country coal are proceeding at Cardiff at the time we write, and are conducted by Mr. Tamlin, engineer, of the Royal Dockyard, Woolwich, and Mr. Lyne, engineer, of the Royal Dockyard, Portsmouth. The coal tried has been that from Aberdare, and the steamer *Isabella Crown* has been made the theatre of experiment. On Friday, the Aberdare coals were tried with perforated doors, and the same apparatus was used on Saturday for the Newcastle coals. A great many gentlemen connected with the coal trade have suggested that the experiments should be repeated on board a steamer, on a trial trip at sea, thus proving their confidence in the result of the fullest investigation. The conclusions of the Commissioners will not be known till they have reported officially.

An inquest has been opened at Pontypool, on the body of a man who was killed in the Glyn Pit. Deceased was crossing the mine, when a piece of iron belonging to the band fell on his head, and he never spoke afterwards. The enquiry stands adjourned.

MANUFACTURE OF COPPER.—No. III.

Passing on to July, 1832, we come to the invention of Messrs. Pethe- rick and Kingston, of Tywardreath and Islington; but this appears to refer simply to the washing of minerals. The water is suddenly let into the vessel from an elevated position, instead of being otherwise introduced. On December 22, 1835, Mr. Nicholas Troughton, of Broad-street, patented a certain combination of apparatus for operating on the vapours evolved from copper ores passing from ovens or retorts, in which the requisite heat for calcination is obtained without permitting the vapour of the fuel to mix with those from the ores, in such a manner that the sulphurous and other injurious matters are condensed and separated, and not permitted to pass into the atmosphere.

The next important patent is that of Mr. E. Duclos, of Oystermouth. The chief feature of this invention, so far as regards its application to the manufacture of copper, was that it admitted of either rich or poor ores to be treated without admixture, it being usually thought that ore must be reduced to a certain percentage in order that it might be successfully smelted. He first extracts a portion of the sulphur from the ore by distillation out of the reach of air; leaving, however, sufficient sulphur to form sulphates. To effect this conversion a peculiar form of apparatus is used, which can only be described by drawings. The patent, however, was fully described at the time in the *Mining Journal*.

Another patent, obtained by Mr. Troughton, follows; its object is to obtain sulphur in the process of roasting copper ores, in place of permitting the vapours thereof to escape into the atmosphere. The second part of the invention relates to the obtaining of sulphuric acid by the combination of vapours produced in roasting copper ores in the processes of obtaining copper therefrom. In 1839 Mr. Charles Schaffhaud claims the mixing of the ores with bodies of an alkaline nature, which have an affinity for sulphur, in order to decompose the sulphides, or of mixing the same alkaline bodies and carbonaceous matters to decompose the carbonate of copper. But his claim does not extend to the use of alkaline or carbonaceous matters as then used. He also claims as part of his invention the causing the air which has passed over the heated ore in the calcining chamber, mixed with

the rising fumes and steam, to pass through the fire-grate of the same furnace, connected with the calciner by its own action, or through a separate furnace, before it escapes through the chimney.

On May 22, 1839, Mr. W. Jeffries, of Mile-end, claims a method of submitting the ore to a slow process of calcination or roasting by the employment of a small quantity of fuel, kept in a state of slow combustion by the regulated admission of atmospheric air, and after such roasting allowing the ore to remain for several days in a mixture of alkali and water exposed to the atmosphere, when it will be found ready for smelting in the reverberatory furnace, the metal being in a much more advanced state in its progress towards purity than by any of the ordinary modes of smelting. On the same day Mr. Troughton patented an improved construction of retorts and furnaces for calcining ores in the process of obtaining copper; and secondly, a mode of smelting copper by means of blast. He also claims an arrangement for obtaining copper by dissolving out the metal by sulphuric acid. On June 22, in the same year, Mr. Edward Brown, of White-rock, Swansea, obtained a patent under which he claims the use of any portion of lime in combination with any other matters or substances whatever in roasting, or in refining copper ores. The last patent, in 1839, referring to the manufacture of copper, is that of Mr. Thomas Bell, of St. Austell, which related to obtaining copper from the slag. The slags were crushed, granulated in water, and the fine copper separated by washing.

Mr. W. I. Cookson, of Newcastle-on-Tyne, appears next on the list, he having obtained a patent on Jan. 5, 1840. The invention is applicable to the treatment of sulphides and oxides of copper. From the sulphurous ores he obtains the metal and sulphuretted hydrogen gas, and from the oxide ores he obtains the metal. He describes five distinct processes:—1. When the sulphurous ores contain a large proportion of iron and sulphur, and little earthy matter, he reduces the sulphide of iron to proto-sulphide by distilling over sulphur. By dissolving the iron in the proto-sulphide in hydro-chloric or sulphuric acid, he obtains sulphuretted hydrogen gas and muriate or sulphate of iron. The sulphide of copper and the silver, if any, remain undissolved, and metallic copper may be obtained from the sulphide by the means usually employed to obtain metallic copper from native copper ores; but by means hereafter described, he can obtain from the undissolved residuum metallic copper and sulphurous acid, and also any silver which may be therein contained.—2. He roasts the sulphurous ores at a bright red heat whilst exposed to the action of the atmosphere, until the sulphides of iron and copper contained are converted into oxides, and mixes the roasted ores with muriatic acid to obtain muriate of copper.—3. He roasts the ore, as in Process 2, but discontinues roasting when the greater part of the sulphide of iron has been converted into oxide. The copper remains as sulphide, and by exposure to the action of atmospheric air at a suitable heat the sulphide is converted into sulphate, and the remaining sulphide of iron becomes oxidised. He then separates the sulphate of copper by dissolving it, and thus obtains oxide of iron (from which metallic iron may be obtained) and sulphate of copper, from which he obtains metallic copper and sulphurous acid.—4. He roasts the sulphurous ores, as in Process 3, until about one-half of the sulphide of iron has been converted into oxide, no part of the sulphide of copper being converted into oxide. He then fluxes the roasted ores in mixture with carbonaceous matter, and thus obtains a regulé, containing sulphide of iron in the state of proto-sulphide, capable of being decomposed by acids, and sulphide of copper and silver, if any. He then dissolves iron contained in the regulé by muriatic or sulphuric acid, and thus obtains sulphuretted hydrogen gas and muriate or sulphate of iron. The sulphate of copper and silver, if any, remain undissolved, and metallic copper may be obtained, as in Process 3.—5. This process is applicable to oxide ores only. By digesting these with muriatic or sulphuric acid he dissolves oxide of copper, and obtains either muriate of copper, from which metallic copper may be obtained, or sulphate of copper, from which metallic copper and sulphurous acid may be obtained, according to Process 3.

In July, 1840, Mr. W. Jeffries obtained another patent, under which he claims a mode of smelting copper ores by treating the melted metal with carbon, or with an alkali. This brings us to the end of 1840.

THE TYLDESLEY COLLIERY EXPLOSION.—The inquest on the 25 persons killed by the explosion at this colliery is now concluded, and a verdict of "Accidental Death" has been returned, the jury expressing their unanimous opinion that due precautions have not been taken to ensure the lives of the workmen employed in the mine; finding that the ventilation of the mine has been generally imperfect, more especially from the area of the outlet airways being much too small. They also were of opinion that there had been great want of practical knowledge of the working of the mine on the part of the underlooker, and also that the firemen had neglected their duties. Perhaps the most important of the evidence taken was that of Mr. Joseph Dickinson, the Government Inspector of Coal Mines. Soon after the accident Mr. Dickinson went down the pit and investigated the circumstances under which the explosion took place. He could not offer any opinion as to where the gas was lighted, but it did not appear to have been at any of the points where open lights were allowed. It must, therefore, either have been lighted at an open safety-lamp, or through a defective one. Some of the safety-lamps are blown to pieces, and it is impossible to say whether or not they were in good order at the time. Of those which remain, some are certainly not in such good order as they should be. Some of the screws have the thread much worn, and one or two of the prickler holes seem too large for safety. It appears that blasting with gunpowder was allowed. He had examined all the working faces where the gas is likely to have been lighted, but could not find, nor could he hear of, any place where a shot has been recently fired. He thought that it must have been lighted at an open or defective safety-lamp. The lamps were not locked, and could, therefore, be opened by any of the men. He had examined the lamps, but could not pass flame through them. No one could give any information as to the previous state. As to the ventilation of the colliery, he had measured the air, and found there was rather less than 6000 cubic feet per minute for the whole of the workings, on both the east and west side. The eastern split traverses about 1340 yards, and the western split about 3840 yards. The air is split at the bottom of the engine brow, the east current being brought over the engine brow by an air crossing, and united to the west current in the back brow there, both splits going together up the back brow, or return air course, to the up-cast shaft. The area of both splits is together in going down the engine brow, there is an area of about 39 square feet. The return air course, where both splits are together, has been allowed to squeeze and fall, until now the area at the smallest part is only 6 ft. This is so small that he did not think that at the time of the explosion there would be more than 6000 cubic feet of air passing from the whole of the workings; and there would also be considerable escapes—first at the door on the first level, which, when it opens, allows air to escape without going into the second level and its workings and into the No. 2 jig brow. This is an important door, and it is only single. Then, again, tarpauling cloths alone have been relied upon in many places without there being any air-door; for instance, the whole of No. 2 jig brow and its levels are dependent upon one cloth. He did not think there could be an adequate amount of ventilation constantly produced to dilute and render harmless noxious gases to such an extent as that the working places of the pits and levels of the colliery could have been under ordinary circumstances in a fit state for working, as required by the first general rule of the Inspection Act, and which is required to be observed by the owners or their principal agent, and could not be deputed to others. The workmen—at all events those who understood fire-damp, and worked in the far ends of the Nos. 1 and 2 jig-brows—must, in his opinion, have been aware that such was the case, and it is to be regretted that they did not give him any intimation of what was going on. Without such co-operation on the part of the workmen it is physically impossible for the Inspector to find out any but a very small proportion of the places where danger exists, and where it admits of being removed. He wished this to be distinctly understood; and to show that this is the case, he might state that there are in his district, in round numbers, 400 working shafts—this Tyldeley, where the explosion has taken place, being one of them. Also 1000 breast-eyes, whereby workings are carried on the same as in the pits, making a total of 500 coal-works. Besides these, there were 250 air and ladder pits, making 750 shafts and breast-eyes in actual use; in addition to which there was a large number of old pits, either out of use or only used for ventilation. There are about 500 steam-boilers, winding-roads, cages, guides, &c., besides underground workings. The underground galleries alone are between 4000 and 5000 miles long, and there are about 30 miles of underground canals. The galleries and the cut-throughs, through which the air passes, are constantly being changed. The collieries extend over a wide district, and to visit them all would involve a surface travelling alone of 12,000 miles, which would have to be accomplished in short journeys of about 25 miles per day. The duty of Inspectors is not to take upon themselves the management of collieries, but, as far as they can, to see that the managers do their duty. The responsibility as regards the carrying out of the first general rule rests solely upon the owners and their principal agents. There was no view at this colliery combining practical and scientific knowledge, as he had over and over again recommended that there should be generally throughout his district, though not individually to the proprietors of this mine. Had there been such a person he did not think the airways would have been allowed to be closed up as they were; nor would the pillars have been going on, forming the three goaves to which he had alluded, and which is a system that was discontinued to his knowledge 20 years ago, and replaced by the system of panel-work introduced by the late Mr. Roddie, the return air from such work being carried into the return air course without having to pass through the new workings. This is understood by viewers, but not by commercial men, who sit in the mine to see whether or not those orders can be safely carried out. A similar system is being pursued in several other collieries in this district; and explosions of even a worse character may occur. Great responsibility is incurred by owners in not having a proper viewer to superintend the operations. With regard to the lamps being unlocked, he might say that there is a prejudice amongst the men against having them locked. He was sorry it should be so; and, in his opinion, no colliery owner does his duty who works a colliery of this sort, unless he has all the lamps locked.

CURIOUS COLLIERY ACCIDENT.—The *Alcoa Advertiser* states that J. Hunter, a miner, entered into one of the colliery tubs or hatches, intending to descend a pit at Keanet Village. After proceeding a short way down the pit the lowest iron hoop of the hatch fell off. Hunter feared the worst, but ere he had time for reflection of the hatch fell off. Hunter himself was precipitated to the bottom of the pit, a depth of 14 fms. After some delay the unfortunate man was again hoisted to the surface, and he was found to be little injured, and was able to walk home with a little assistance.

WYLAN'S STEAM FUEL COMPANY.—The payment of the call of 5*l.* per share, made by the Master of the Rolls, is peremptorily ordered to be paid to Mr. T. R. Preston, the official manager, on or before Jan. 10.

STEPHENSON MONUMENT.

Amount of subscriptions already advertised	£2674 0 0
Messrs. Boleck and Vaughan, Middlemore	100 0 0
Joseph Louch, Esq., Westminister	50 0 0
Messrs. W. H. Lambton and Co., Newcastle	50 0 0
Benjamin C. Lawton, Esq., Newcastle	50 0 0
James Goss, Esq., Mount Villars, York	50 0 0
The Bowling Iron Company, Bradford	50 0 0
Messrs. Smith, Beacock, and Tannett, Leeds	50 0 0
Subscriptions of workmen employed in the locomotive department of the North-Eastern Railway	36 18 4
Henry Silverton, Esq., Minister Aeneas	25 0 0
Messrs. Palmer Brothers, Newcastle	25 0 0
John Bowes, Esq., and Partners, Newcastle	25 0 0
Samuel Carter, Esq., Westminister	25 0 0
Hugh Taylor, Esq., Marsdon	25 0 0
Messrs. Anthony L. King and Co., Leeds	25 0 0
John Dewrance, Esq., London	25 0 0
John Shield, Esq., Stote's Hall, Newcastle	21 0 0
Messrs. Rayne and Burn, Newcastle	21 0 0
The Trustees of the Coal Factors' Society, London	20 0 0
Lord Harry Vane, M.P., Newcastle	20 0 0
Frances Anne Vane, Marchioness of Londonderry	20 0 0
Messrs. Christopher Simpson and Sons, Hull	20 0 0
Richard D. Shafto, Esq., M.P., Durham	20 0 0
The Washington Chemical Company, per I. Lowthian Bell, Esq.	20 0 0
Richard Grainger, Esq., Newcastle	15 0 0
James Fenton, Esq., Low Moor, Bradford	10 10 0
Messrs. W. and C. Burnip, Newcastle	10 10 0
James Dale, Esq., Newcastle	10 10 0
Messrs. Joseph Cowen and Co., Newcastle	10 10 0
John Dobson, Esq., Newcastle	10 10 0
J. H. H. Atkinson, Esq., Newcastle	10 10 0
William Hatt, Esq., M.P., Gilsdale, Gateshead	10 0 0
W. P. Marshall, Esq., Birmingham	5 0 0
Messrs. Ray and Usher, Hylton Forge, Sunderland	5 0 0
Lord Adolphus Vane Tempest, M.P.	5 0 0
Messrs. H. and J. Barker, Rotherham	5 0 0
William Anderson, Esq., Denme House, South Shields	5 0 0
W. H. Budden, Esq., Newcastle	5 0 0
Right Hon. J. R. Mowbray, M.P., Durham	5 0 0
Mark Elliott, Esq., Houghton-le-Spring	5 0 0
William Marshall, Esq., Westoe, South Shields	5 0 0
James Dees, Esq., C.E., Whitehaven	5 0 0
Joseph Fletcher, Esq., C.E., Whitehaven	5 0 0
W. S. Lindsay, Esq., M.P., Fynemouth	5 0 0
Messrs. Clayton, Shuttleworth, and Co., Lincoln	5 0 0
George Forster, Esq., Newcastle	5 0 0
George Hunter, Esq., Newcastle	5 0 0
R. Kitchin, Esq., Warrington	5 0 0
James Dunlop, Esq., Newcastle	5 0 0
W. Rutson, Esq., Newby Wiske, Thirsk	5 0 0
Nathaniel Plews, Esq., Darlington	5 0 0
Nathaniel Grace, Esq., Newcastle	5 0 0
T. E. Headlam, Esq., M.P., Newcastle	5 0 0
The Vicar of Newcastle	5 0 0
J. T. Thompson, Esq., Newcastle	5 0 0
Robert Ingham, Esq., M.P., South Shields	5 0 0
Lord Lorraine, M.P.	5 0 0
Messrs. Palmer and Allport, Jarrow	5 0 0
John Wales, Esq., Hutton Colliery	5 0 0
Edward Charlton, Esq., M.D., Newcastle	5 0 0
Rev. John Walker, Kirkcubrighton	5 0 0
Francis Johnson, Esq.	5 0 0
Messrs. J. and S. Burrell, Newcastle	5 0 0
Bedworth Lanchester, Esq.	5 0 0
J. Cabry, Esq., Midland Great Western Railway of Ireland, Dublin	5 0 0
Alexander Allan, Esq., Perth	2 10 0
G. W. Stable, Esq., Newcastle	2 2 0
Henry Ingledew, Esq., Newcastle	2 2 0
William Kendall, Esq., Blyth and Tyne Railway, Newcastle	2 2 0
Ralph Brown, Esq., Wednesbury	2 2 0
S. Wilfrid Haughton, Esq., Dublin	2 2 0
Robert Frazer and Sons, Newcastle	2 2 0
James Goss, Esq., York	2 2 0
John Blenkinsop, Esq., Seaburn	2 2 0
The proprietor of North of England Advertiser	2 2 0
The Sheriff of Newcastle	2 2 0
John Todd, Esq., Newcastle	2 2 0
Herman J. Schier, Esq., Newcastle	1 1 0
C. Berkley, Esq., Marley Hill	1 1 0
The proprietor of the Gateshead Observer	1 1 0
James Clepham, Esq., Gateshead	1 1 0
G. J. Keenir, Esq., Gateshead	1 1 0
T. M. Greenough, Esq., M.D., Newcastle	1 1 0
John Elliott, Esq., Newcastle	1 1 0
James Williams, Esq., Sunderland	1 1 0
Mr. John Call, Newcastle	1 1 0
Mr. T. E. Ward, Newcastle	1 1 0
Messrs. T. E. Ward and Co., Sunderland	1 1 0
Mr. J. S. Milford, Newcastle	1 1 0
Mr. James Oliver, Newcastle	1 1 0
Mr. John Milburn, Jarrow	1 1 0
Mr. Robert Simpson, Gateshead	1 1 0
Mr. Thomas Scott, Jarrow	1 1 0
Mr. John Armstrong, Sunderland	1 1 0
Mr. Thomas Towns, Newcastle	1 1 0
Mr. George Bailey, Tynemouth	1 1 0
Mr. George Bailey, Newcastle	1 1 0
Mr. Thomas Gray, Newcastle	1 1 0
Mr. E. H. Ryott, Gateshead	1 1 0
Mr. J. A. Haswell, Gateshead	1 1 0
W. A. Brooks, Esq., Newcastle	1 1 0
Edward Oliver, Esq., Lewes, Sussex	1 1 0
J. Wilson, Esq., Snipston Colliery, Derbyshire	1 1 0
Mr. R. Blagburn, Gateshead	1 1 0
Mr. Jared Nixon	1 0 0
William Hutchinson, Esq., West Hartlepool	1 0 0

Total £2762 2 4

The committee are desirous to proceed as quickly as possible to carry out the resolutions adopted at the public meeting held on the 25th October, and respectfully invite those gentlemen who propose subscribing to the Stephenson Monument to favour the treasurer or secretaries with their names and the amount of their contributions as early as convenient.

The committee contemplate raising the sum of £5000; and, as soon as the subscriptions reach £4500, a meeting of the subscribers will be convened, to decide on the character of the proposed monument.

TREASURER.—JAMES LOWTHIAN BELL, Esq., Newcastle-on-Tyne.

HONORARY SECRETARIES.—WILLIAM KELL, F.S.A.; JOHN A. HASWELL, MINE. INST. M.E.; LITERARY AND PHILOLOGICAL SOCIETY, Westgate-street, Newcastle.

* Contributions to the fund will be received by the treasurer and secretaries: Charles Manby, Esq., 25, Great George-street, Westminister; W. P. Marshall, Esq., 81, Newhall-street, Birmingham; and at all the banks in Newcastle, Durham, Darlington, Bishop Auckland, Barnard Castle, Northallerton, Thirsk, Yarm, Stockton, Middlesbrough, Hartlepool, West Hartlepool, Seaham Harbour, Sunderland, South Shields, North Shields, Morpeth, Alnwick, Berwick, and Hexham.

INVESTMENTS IN BRITISH MINES.

Full particulars of the most important Dividend and Progressive Mines will be found in the Fourth Edition of

BRITISH MINES CONSIDERED AS AN INVESTMENT.

Recently published, by J. H. MURCHISON, F.G.S., F.S.S.

Mr. Murchison also publishes a QUARTERLY REVIEW OF BRITISH MINING, giving, at the same time, the Position and Prospects of the Mines at the end of each quarter, the Dividends Paid, &c.; price 1s. Reliable information and advice will at any time be given by Mr. Murchison, either personally or by letter, at his offices, No. 117, Bishopgate-street Within, London, where copies of the above publications can be obtained.

OPINIONS OF THE PRESS.

Mr. Murchison's new work on British Mines is attracting a great deal of attention, and is considered a very useful publication, and calculated to considerably improve the position of home mine investments. —*Mining Journal.*

The book will be found extremely valuable. —*Observer.*

A valuable little book. —*Globe.*

A valuable guide to investors. —*Herapath.*

Mr. Murchison takes sound views upon the important subject of his book, and has placed, for a small sum, within the reach of all persons contemplating making investments in mining shares that information which should prevent rash speculation and unproductive outlay of capital in mines. —*Morning Herald.*

Of special interest to persons having capital employed, or who may be desirous of investing in mines. —*Morning Chronicle.*

Parties requiring information on mining investments will find no better and safer instructor than Mr. Murchison. —*Leeds Times.*

As a guide for the investment of capital in mining operations is inestimable. One of the most valuable mining publications which has come under our notice, and contains more information than any other on the subject of which it treats. —*Derby Telegraph.*

To those who wish to invest capital in British Mines, this work is of the first importance. —*Welshman.*

This work enables the capitalist to invest on sound principles; it is, in truth, an excellent guide. —*Plymouth Journal.*

Persons desirous to invest their capital in mining speculations, will find this work a very useful guide. —*Warwick Advertiser.*

It is full of carefully compiled and reliable information relative to all the known mines in the United Kingdom. —*Sheffield Free Press.*

Those interested in mining affairs, who are desirous of becoming speculators, should obtain and carefully peruse this book. —*Monmouth Review.*

Every person connected, or who thinks of connecting himself, with mining speculations should possess himself of this book. —*North Wales Chronicle.*

A very valuable book. —*Cornewall Gazette.*

All who have invested, or intend to invest, in mines should peruse this able work. We believe a more useful publication, or one more to be depended on, cannot be found. —*Plymouth Herald.*

With such a work in print, it would be gross neglect in an investor not to consult it before laying out his capital. —*Post Herald.*

Mr. Murchison will be a safe and trustworthy guide, so far as British Mines are concerned. —*Bath Express.*

In desiring the attention of every one who seeks profitable investment of his capital. —*Brighton Examiner.*

This is really a practical work for the capitalist. —*Stockport Advertiser.*

All who have invested, or intend to invest, in mines, would do well to consult this very useful work. —*Leeds Express.*

Board of Admiralty, Somerset House.

CONTRACT FOR LIGNUM VITÆ.—THE COMMISSIONERS FOR EXECUTING THE OFFICE OF LORD HIGH ADMIRAL OF THE UNITED KINGDOM OF GREAT BRITAIN AND IRELAND DO HEREBY GIVE NOTICE, that, on Tuesday, the 11th January next, at Two o'clock, they will be READY TO TREAT with such persons as may be willing to CONTRACT for SUPPLYING Her Majesty's Dockyard at Portsmouth with SIXTY TONS of ST. DOMINGO LIGNUM VITÆ, of from 6 1/2 to 10 1/2 inches diameter; and TEN TONS of WHITE BAHAMA LIGNUM VITÆ, of from 3 1/2 to 4 inches diameter.

A form of the tender may be seen at the said office. No tender will be received after Two o'clock on the day of Treaty, nor will any be noticed unless the party attends, or an agent for him duly authorised in writing.

Every tender must be addressed to the Secretary of the Admiralty, and bear in the left-hand corner the words "Tender for Lignum Vitæ," and must be delivered at Somerset-place, accompanied by a letter signed by a responsible person, engaging to become bound with the person tendering, in the sum of £200, for the due performance of the contract.

Department of the Storekeeper General of the Navy, Somerset-place, Dec. 22, 1858.

East India House.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA IN COUNCIL, THE FINANCE, HOME, AND PUBLIC WORKS COMMITTEE HEREBY GIVE NOTICE, that they will be READY, on or before Tuesday, the 4th January next, to RECEIVE PROPOSALS in writing, sealed up, from such persons as may be willing to SUPPLY IRONMONGERY; and that the conditions of the said contracts (two in number) may be had on application at the secretariat office, where the proposals are to be left any time before Eleven o'clock in the forenoon of the said 4th day of January, 1859, after which hour no tender will be received.

J. COSMO MELVILL.

East India House.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA IN COUNCIL, THE FINANCE, HOME, AND PUBLIC WORKS COMMITTEE HEREBY GIVE NOTICE, that they will be READY, on or before Friday, the 31st inst., to RECEIVE PROPOSALS in writing, sealed up, from such persons as may be willing to SUPPLY COPPER SHEETS, HOOPS, AND BOLTS; and that the conditions of the said contract may be had on application at the secretariat office, where the proposals are to be left any time before Eleven o'clock in the forenoon of the said 31st day of December, 1858, after which hour no tender will be received.

J. COSMO MELVILL.

FIVE PER CENT. DEBENTURES.—RECIFE AND SAO FRANCISCO FERNAMBUCO RAILWAY COMPANY (LIMITED).

THE DIRECTORS of this company are PREPARED TO RECEIVE TENDERS for LOANS to a limited amount on DEBENTURE BONDS, in sums of £100 and upwards, for periods of not less than three nor more than seven years, at 5 per cent. per annum. The interest, which will be the first charge on the entire revenue of the company, will be paid half-yearly, at Messrs. Heywood, Kennards, and Co's., Lombard-street, London, on presentation of the coupons.

Proposals to be addressed to the secretary, at the offices of the company, Gresham-house, Old Broad-street, London, E.C.

By order, W. H. BELLAMY, Sec.

COLONIAL BANK.

Subscribed capital £2,000,000. Paid-up capital £200,000.

THE COURT OF DIRECTORS of the Colonial Bank HEREBY GIVE NOTICE, that, in pursuance of the provisions of the Charter, a HALF-YEARLY GENERAL MEETING of the proprietors will be HELD at the London Tavern, Bishopsgate-street Within, on WEDNESDAY, 5th January, 1859, at Twelve for One o'clock precisely, to receive the report of the proceedings of the Corporation, and for the election of five directors and one auditor, in the room of the following gentlemen, who go out by rotation, viz.:

Thomas Naughton, Esq.
William Telford Hibbert, Esq.
Charles Macleod, Esq.
Thomas Macleod, Esq.
Sir Walter Minto Townsend Farquhar, Bart., M.P.
Eden Colville, Esq., Auditor.

And who being eligible offer themselves for re-election. The transfer books of the corporation will be closed on the 22nd inst., and re-opened on the 29th January, 1859.

By order of the Court of Directors, C. A. CALVERT, Sec.

13, Bishopsgate-street Within, December 12, 1858.

TO THE SHAREHOLDERS OF THE COMPANY OF PROPRIETORS OF THE ROYAL CONSOLIDATED COPPER MINES OF SAN FERNANDO, CUBA (LIMITED).

NOTICE is hereby given, that, at an EXTRAORDINARY GENERAL MEETING of the Company of Proprietors of the Royal Consolidated Copper Mines of San Fernando, Cuba (Limited), held at the London Tavern, Bishopsgate-street, on Monday, the 29th day of November, 1858, the following resolutions were passed, namely:

That the Company of Proprietors of the Royal Consolidated Copper Mines of San Fernando, Cuba (Limited) be wound-up voluntarily.

That Cunyngnham Borthwick, Esq.; Thomas Close, Esq.; Walter Sharp, Esq.; and William Daillyon Starling, Esq., be the liquidators for the purpose of winding-up the affairs of the Company of Proprietors of the Royal Consolidated Copper Mines of San Fernando, Cuba (Limited), and distributing the property thereof.

And notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the said Company of Proprietors of the Royal Consolidated Copper Mines of San Fernando, Cuba (Limited), will be HELD at the London Tavern, Bishopsgate-street, on Monday, the 10th day of January, 1859, at Two o'clock in the afternoon precisely, for the purpose of confirming such resolutions respectively; and at which last-mentioned Extraordinary General Meeting it is intended to propose a resolution for the confirmation of the aforesaid resolutions, and for the appointment of the said Cunyngnham Borthwick, Thomas Close, Walter Sharp, and Wm. Daillyon Starling as liquidators, in the terms thereof.

By order of the Directors, JOSEPH BRAND, Sec.

Dated the 23rd day of December, 1858.

NEW ZEALAND.

FOR SALE BY PRIVATE CONTRACT.

THE ISLAND OF KAWAU.

Offering an opportunity to the minded speculator rarely met with. Kawau, which contains about 5000 acres, is of freehold tenure, and situated on the east coast of the Northern Island of New Zealand. It is distant some 20 miles to the northward of Auckland (the capital) and two miles from the mainland, and forms one of the principal leading points for vessels entering the Hauraki Gulf, or Frith of the Thames.

The strait between it and the main land affords safe anchorage and favourable navigation for boats and small vessels, and the extensive natural harbour of Bon Accord, which runs about two miles into the centre of the island, is of sufficient depth and safety to shelter a considerable fleet of vessels.

The island contains copper, and mining was formerly carried on to a considerable extent. There are numerous bays and inlets in the island, surrounded with luxuriant vegetation, supporting a large number of wild and tame cattle.

Further particulars may be had, and offers in writing will be received, at the offices of the North British Australasian Company (Limited), to whom the property belongs. A royalty will be reserved on all minerals which may be found on the property.

By order, DAVID BUDGE, Sec.

27, New Broad-street, London, E.C., September 16, 1858.

HORIZONTAL OR VERTICAL HIGH-PRESSURE ENGINES.

OF ALL SIZES AND DESCRIPTION. PORTABLE ENGINES, for agricultural or contractors' purposes. NEW AND SECOND-HAND CONDENSING BEAM ENGINES. NEW AND SECOND-HAND LOCOMOTIVE ENGINES. RAILS AND CHAIRS, for permanent way contractors or miners. ENGINEERS' and MACHINE MAKERS' TOOLS of every description. —WHEATLEY KIRK, Cross-street Chambers, Cross-street, Manchester.

CAPITAL SECOND-HAND PLANING MACHINE, with plane

9 ft. long by 3 ft. wide, by 2 ft. 6 in. high, self-acting in all its cuts, weighing about 3 tons. Price, £110. —WHEATLEY KIRK, Cross-street Chambers, Manchester.

STEAM ENGINE FOR SALE.—A 24 inch ROTARY

CONDENSING HORIZONTAL STEAM ENGINE FOR SALE, 6 ft. stroke in cylinder, heavy fly-wheel, drawing machine attached, and connection for pumping, with a 9 ton Cornish boiler, the whole in good condition. —Particulars may be had by applying to Messrs. NICHOLLS, WILLIAMS, and Co., Engineers, Tavistock.

MINING MATERIALS FOR SALE. Orders executed for new machinery and materials at the shortest notice, and of best quality. Machinery sent to all parts of the world, and able engineers to erect it.

MESSRS. P. THORNE AND CO. are ready to SUPPLY the

MINING COMMUNITY with the same class of MACHINES that have given such favourable results in the REDUCTION of GOLD-BEARING QUARTZ, operated under Mr. Squire's process, previous to entering their patent mill and patent amalgamator. For full particulars, refer to Mr. John H. Clement, F.C.S., 3, Gloucester-terrace, Church-lane, Kensington; or see his report to us of the late trial carried on in our mill during November, 1858.

These machines, as will be found on reference to Mr. John H. Clement, or his report, are admirably adapted to the reduction of the native chlorides of silver. Mr. Clement practised his profession as a metallurgist for many years in the district of Zacatecas, Mexico, also in Spain and in England.

Applications addressed to us at the Gold and Silver Works, Ranelagh-road, Thames-bank, Pimlico, or to Mr. JOHN H. CLEMENT, will be promptly attended to.

December 23, 1858.

HOWARTH AND CO'S NEWCASTLE CEMENT,

FOR STEAM JOINTS, &c.

HOWARTH AND CO'S VICTORIA VALENSH. A SUBSTITUTE FOR WHITE OR RED LEAD, for ALL KINDS OF GAS PURPOSES, &c., at a SAVING OF FORTY PER CENT.

IRRESISTIBLE AGAINST AIR, SALT WATER, ACIDS, OR AMMONIA. For prices and testimonials, apply to Mr. W. G. FREEMAN, 22, Wyndham-place, Plymouth, Agent for Cornwall, who has a stock always on hand.

ASSAY OFFICE, AT MESSRS. TOWNSEND, WOOD, AND CO'S IRON AND COPPER YARDS, SWANSEA.

MR. BYERS continues to RECEIVE SAMPLES FOR ASSAY or ANALYSIS OF COPPER, IRON, SILVER, &c., and all other metals, COAL, &c.

ASSAY OFFICE AND LABORATORIES,

DUNNING'S ALLEY, BISHOPSGATE STREET WITHOUT, LONDON.

Conducted by MITCHELL and RICHARD (late John Mitchell, F.C.S.), Author of *Manual of Practical Assaying* (Metallurgical Papers, &c.).

Assays and Analyses of every description performed as usual. Special Instruction in Assaying and Analysis. Consultations in every branch of Metallurgical and Manufacturing Chemistry. Assistance rendered to intending Patentees, &c.

For amount of fees, apply to the office, as above.

THE CORNWALL GREAT CONSOLIDATED LEAD AND COPPER MINING COMPANY (LIMITED).

In 12,000 shares of £2 each.

OFFICES.—8, NEW BROAD STREET, CITY.

Shares in the above company to the extent of 10,000 have been taken up by the directors and amongst their friends and connections, without advertisement. The remaining 2000 shares are now offered to the public at par. The company was established last year, for the purpose of purchasing and working a group of mines—viz., the Latchley Consols, South Maria, Tamar Maria, and Tamar River sets—the four forming the western boundary of the Devon Great Consols Mine, the lodes of which are laid down by competent authorities as passing through this property. During the progress of the working at Latchley, the large influx of water in the 60 ft. level rendered the aid of a powerful steam-engine necessary; one of 150 horse power was purchased, erected, and is in full work. At the above-named 60 ft. level two lodes of fine copper ore are now being opened upon, which have been traced from the shallow levels, and found to increase in value as they descend. In the South Wheel Maria a good lode has been discovered at 40 fms., which will soon be reached at a greater depth.

The company are in possession of most satisfactory reports of surveys, &c., copies of which may be had with prospectus and forms of application for shares, at the office of the company, or from THOMAS SMITH, Esq., sen., stock broker, 1, Cornhill Chambers, Bank, and Stock Exchange.

CHARLES PEARSON, Sec.

GREAT CRINNIS COPPER MINES.

In 6000 shares.—Deposit £1 per share.

On the "COST-BOOK SYSTEM."

Conducted by a Committee of Management of the highest respectability.

BANKERS.—Messrs. Masterman, Peters, Mildred, and Co.

PROSECUTORS.—Mr. William Charles.

OFFICES.—27, AUSTINFIELDS, LONDON, E.C.

These mines are situated in the parish of St. Austell, in the county of Cornwall, and are held by lease granted by Major Carlyn, for 21 years, at 1-20th rates, or royalty.

From 1808 to 1828 copper ore was raised from these mines of the value of £400,000. This, without doubt, was the richest deposit of copper ever found in Cornwall.

It is the conviction of practical men that the counter part of this deposit lies eastward under the great cross-course, and recent explorations would seem to confirm this view, inasmuch as the 80 has already been driven through a very large lode for a long distance, with a leader of ore varying in value from 8s. to 30s. per fathom. The current opinion is that this forms the top of a large deposit of ore.

It is intended to drive the 100 under the ore lode in the 80 as rapidly as possible; already this driving is within 40 fms. of the line of the first improvement in the 80.

The position and prospects of the present company may be briefly thus stated.—The late company was so constituted that it had not the power to make calls after having expended its capital. No course, therefore, remained but, in accordance with the conditions of the lease under which the mines were held, to wind-up the affair, and to offer the plant and works for sale to the lord of the manor. He gave the late company 4000l. for the machinery and mines, all drained, and in good working order. He has sold them in the same state to the present company for that sum. Had it fallen to the lot of the present company to erect machinery, and to bring the works to their present state, the cost could not have been less than 20,000l. It need scarcely be added that this is a most advantageous purchase for those who now join the undertaking. Nothing has been paid as premiums to promoters, nor a single free share granted to any one.

The whole of the capital will be applied to the purchase and working of the mines, while all the agents who have inspected them express their firm conviction that great results are likely to follow a spirited and judicious working eastward under the great cross-course, and progressive in depth.

During the last four months of the late company's operations the mines produced ore of the value of £1978 12s. 10d. There are several tribute pitches which can be worked at a profit as soon as active operations are resumed.

The mines are paid for, and the new company will commence adequate and extensive workings on Jan. 1, 1859. There are about 4500 shares taken and paid for, and the remaining 1500 will be offered to the public on the same conditions as the shares are held by those who have already subscribed—on a deposit of £1 per share.

The promoters of this undertaking would just bring the following synopsis of facts before the public:—That during the last four months of the existence of the previous company very nearly two thousand pounds worth of ore was produced; that the mines and machinery are already paid for; that the prospects of success in the deep levels east are indisputably of the first order; that neither premium nor free shares have been given to any one; and that three-fourths of the whole amount of shares are already subscribed and paid for before the adventure is offered to the public. The promoters, therefore, feel justified in asserting that these are *bona fide* advantages, not often to be secured in any new undertaking.

Applications for the remaining shares can be made to Mr. Wm. Charles, 27, Austinfields, London, E.C., and from whom any further information may be obtained.

PATENT WIRE ROPES, ONE-HALF THE COST OF HEMP ROPES.

HENRY J. MORTON AND CO'S (2, BASINGHALL BUILDINGS, LEEDS) PATENT WIRE ROPES, for the use of MINES, COLLIERIES, RAILWAYS, &c.; one-half the weight of hemp rope, and one-third the cost; one-third the weight of chain, and one-half the cost—in all deep mines these advantages are self-evident.

References to most of the principal colliery owners in the kingdom.

GALVANIZED SIGNAL CORDS AND KNOCKER LINES: will not rust or corrode, and not affected by the copper water in mines. Very strong, and not at all liable to break. Price from 1s. per 100 yards.

PATENT ASPHALTED ROOFING FELTS, 14, per 100 ft. DRY AIR BOILER FELTS, saving 25 per cent. of fuel.

PATENT BOILER COMPOUND, for bad water.

FAIRBANK'S WEIGHING MACHINES, of all sizes.

GALVANIZED IRON ROOFING AND SPOUTING.

PATENT FLEXIBLE STEAM PACKING, 18, 3d. per lb.

PATENT METALLIC PACKING, 4s. per lb.

PATENT AMERICAN DRIVING BELT, 18, per 100 ft. PATENT ROSE PIPES, for water, &c., one-fourth the price of leather hose.

PATENT GALVANIZED AIR-PIPES, for ventilation.

STOCK OF MINING AND RAILWAY STORES in Liverpool and London:—viz., OILS, GREASES, COTTON WASTE, SPUN YARN, WHITE LEAD, VARNISHES, &c.; and at very low prices.—Address, 2, Basinghall-buildings, Leeds.

N.B. Illustrated price list on application.

PATENT IMPROVED GAS WORKS, OF ALL SIZES,

for the use of PRIVATE HOUSES, MANSIONS, RAILWAY STATIONS, MILLS, COLLIERIES, VILLAGES, MINES, &c.

FIXED COMPLETE, with greatly improved means for purifying, &c.

Works of all sizes, from 10 lights to 500 lights, estimated for. The construction is so simple, that the works can be entrusted to the management of an ordinary labourer or servant. For LIGHTING CORNISH MINES these works are well adapted, and at a cost of one-half below the usual alloy.—Apply to

HENRY J. MORTON AND CO., GALVANIZED IRONWORKS, 2, BASINGHALL BUILDINGS, LEEDS.

SOLE LICENSEES AND AGENTS.

BRICKS.—MESSRS. OATES AND INGRAM inform brick makers

On an extensive scale that their PATENT SOLID BRICK MACHINE is now THOROUGHLY AND EFFICIENTLY TESTED, and are prepared to OFFER the following counties to the trade, in districts, either by ROYALTY or PURCHASE:—Middlesex, Surrey, Sussex, Essex, Kent, Norfolk, Suffolk, Cambridge, Oxford, Gloucester, Hereford, Berks, Bucks, Huntingdon, Devon, Cornwall, Dorset, Wilts, Hants, and Isle of Wight.

With this PATENT MACHINE the ordinary surface clay requires no preparation whatever, whilst that of a rocky nature has hitherto to be passed through rollers for the usual way, and the cost of any TENDERING, or any other work, is reduced. WHEN THE BRICKS ARE REMOVED DIRECT TO THE KILN IN A STATE READY FOR BURNING.

THE MACHINE is now making UPWARDS OF THIRTY BRICKS PER MINUTE at the works of Messrs. KIRK and PARRY, Government contractors, Fort Elson, near Gosport; and also at the Patent Solid Brick Works of T. WELLS INGRAM, Oldbury, near Birmingham.

Application for orders to see

MORE STEAM, LESS FUEL, NO SMOKE.
S.S. "Tanning," Victoria (London) Dock, Dec. 14, 1858.
Sir, Since I wrote to you on the 11th September, we have made fifteen voyages to London from Tanning with your PATENT BUCKLE-TYPE AIR BOILER, and with the same satisfactory results in increase of steam (20 per cent.), saving of fuel (15 per cent.), and prevention of smoke. We have never (as we used to have) any flame in the funnel, and the ventilation of the stoking room is so good that the firemen work with comfort in the steepest weather. The doors are as perfect as when first fitted.
I am, Sir, your obedient servant,
To Mr. J. Lee Stevens, 1, Fish-street-hill, E.C.
N.B.—The profit on 10 voyages, besides paying for the doors, exceeds £100.
FRANCIS KEAY, Chief Engineer.

OVERLAND ROUTE.—WEEKLY COMMUNICATION BY STEAM TO INDIA, &c., VIA EGYPT.
The PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY BOOK PASSENGERS AND RECEIVE GOODS AND PARCELS FOR THE MEDITERRANEAN, EGYPT, ADEN, CEYLON, MADRAS, CALCUTTA, THE STRAITS, CHINA, and ANILIA, by their steamers leaving Southampton on the 4th and 20th of every month; and for the MEDITERRANEAN, EGYPT, ADEN, and BOMBAY, by their packets leaving Southampton about the 11th and 27th of the month.
For further particulars, apply at the company's offices, No. 122, Leadenhall-street; and at the principal places, Southampton.

STEAM TO AUSTRALIA UNDER SIXTY DAYS.
PASSAGE MONEY £14 AND UPWARDS.
BLACK BALL LINE OF BRITISH AND AUSTRALIAN EX-ROYAL MAIL PACKETS AND EAGLE LINE.
In conjunction with the celebrated auxiliary steam clipper GREAT BRITAIN and ROYAL CHARTER.
Appointed to sail punctually from LIVERPOOL on the 5th and 15th of each month.
The above, in addition to being the only line with steamers out of Liverpool, is composed of the LARGEST, FINEST, and FASTEST MERCHANT SHIPS IN THE WORLD.
Ship. Register. Burthen. Captain. Date.
LIGHTNING 2090 4500 CLARKE 5th January.
ROSENA 1166 3000 WILSON 15th January.
MARCO POLO 1625 3500 JOHNSON 5th February.
GREAT BRITAIN. OCEAN CHIEF.
ROYAL CHARTER. INDIAN QUEEN.
LIGHTNING. BRITISH TRIDENT.
CHAMPION OF THE SEAS. GIPSEY BRIDE.
JOHN A. M'KAY. GREAT TASMANIA.
MARCO POLO. COMMODORE PERRY.
EAGLE. METEOR.

The above celebrated steam and sailing clipper ships, forming the only lines honored by a visit from Her Majesty the Queen, and so well known for their rapid passages, punctuality in sailing, and splendid accommodation unsurpassed by any ships in the world, continue to sail regularly between Liverpool and Melbourne, thus affording to passengers and shippers the most unrivalled advantages. The commanders are men of experience, and noted for their kindness and attention to passengers.
The cabin accommodation is most superior, the saloons being elegantly furnished with the requisite to ensure comfort to passengers, and are supplied with beds, bedding, &c. apply to GIBBS, BRIDGES, and CO., merchants, or to JAMES BAIRD and CO., Liverpool; or to T. M. MACRAY and CO., 2, Moorgate-street, London, E.C.

WHITE STAR LINE OF BRITISH AND AUSTRALIAN EX-ROYAL MAIL PACKETS.
SAILING FROM LIVERPOOL TO MELBOURNE, on the 1st and 20th of every month; and from MELBOURNE TO LIVERPOOL on the 1st of every month.
Passengers forwarded by steamers to ALL PARTS OF AUSTRALIA, TASMANIA, &c., at through rates.

Ship. Register. Burthen. Captain. Date.
PRINCE OF THE SEAS. 1427 4500 H. A. BROWN January 20.
BLUE JACKET 1042 3500 J. CLARKE February 1.
ARABIAN 1108 3500 M. GANDY February 20.
Passengers embark on the 19th and 31st January.
Packet of the 20th January, the very magnificent clipper *Prince of the Seas*, 1427 tons register, 4500 tons burthen, Capt. H. A. BROWN.
The *Prince of the Seas* is one of the largest, handsomest, and fastest clipper afloat; was designed expressly for the Australian passenger trade, and is complete in every detail for the general comfort of all her passengers. She has sailed, heavily laden, extraordinary distance of 392 knots, or 431 statute miles, in one day, a rate of speed passing some of the fastest clipper afloat. Her saloons are sumptuously furnished, supplied with bedding, linen, piano, library, chess boards, &c.; the ship also carries food for the use of saloon passengers. Her second cabins are in front of the poop, and bed up in an elegant and superior manner, whilst the between decks are extensive, airy, and thoroughly lighted and ventilated.
For freight or passage apply to the owners, H. T. WILSON and CHAMBERS, 21, Water-street, Liverpool.

WHITE STAR LINE OF BRITISH AND AUSTRALIAN EX-ROYAL MAIL PACKETS.
SAILING BETWEEN LIVERPOOL AND MELBOURNE, on the 1st and 20th of every month, and forwarding passengers by steamers at through rates to ALL PARTS OF AUSTRALIA.
Packet of the 1st of February, the beautiful new clipper ship, *Blue Jacket*, Capt. Clarke, 12 tons register, 3500 tons burthen.
This elegant clipper is sister ship to the celebrated clipper *Moorecroft*, *Genii*, and *W. F. Williams* (which made her last passage home from Australia in 67 days), and is built expressly for this trade. Like her companion ship, the *Red Jacket*, she is of exquisite symmetry, her lines are remarkably sharp, and she is expected to prove one of the fastest clipper in the world. Her main saloon is a magnificent apartment, fitted with great splendor, and replete with every appliance for the luxurious enjoyment of the voyage. A piano, library, linen, bedding, chess boards, &c., are provided for the use of passengers, for whose use a cow is also carried. The accommodations for second cabin, intermediate, and steerage passengers cannot be surpassed.
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AUSTRALIA AND THE NEW GOLD DIGGINGS.
THROUGH PASSAGE TO FITZROY RIVER AND MORETON BAY, BY THE MERSEY LINE OF PACKETS, SAILING FROM LIVERPOOL TO MELBOURNE, on the 25th of every month. The magnificent clipper, *Capitola*, 2500 tons burthen, is the packet of the 25th of the month. She has been in Her Majesty's transport service the last two years, having especially selected on account of her extraordinary speed, which justifies the expectation that she will make the passage out under 70 days. Her second cabin in poop is the best on any ship on the berth, and the chief cabin is elegantly furnished.—Apply to JAMES BAIRD and CO., 20, Water-street, Liverpool; or to their agent, ANDREW KEAY, 26, Leadenhall-street, London, E.C.

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MAPPIN BROTHERS (Manufacturers by Special Appointment to the Queen) the only Sheffield makers who supply the consumer in London. Their London Show Room, 67 and 68, KING WILLIAM STREET, LONDON BRIDGE, contains by far the LARGEST STOCK OF ELECTRO-SILVER PLATE AND TABLE CUTLERY in the world, which is submitted direct from their manufacturing works, SHEFFIELD.
Fiddle Pat. Double Thread. King's Pat. Lily Pat.
Table Forks, best quality £1 16 0 £2 14 0 £3 0 0 £3 12 0
Tea Spoons, best quality 1 16 0 2 14 0 3 0 0 3 12 0
Dessert Forks, best quality 1 7 0 2 0 0 2 4 0 2 14 0
Bassett Spoons, best quality 1 7 0 2 0 0 2 4 0 2 14 0
Tea Spoons, best quality 0 16 0 1 4 0 1 7 0 1 16 0
Sauce Ladles, best quality 0 8 0 0 10 0 0 11 0 0 13 0
Gravy Spoon, best quality 0 7 0 0 10 0 0 11 0 0 13 0
Salt Spoons (with bowls), best quality 0 6 8 0 10 0 0 12 0 0 14 0
Mustard Spoon, best quality 0 1 8 0 2 6 0 3 0 0 3 6
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Pair Fish Carvers, best quality 1 0 0 1 10 0 1 14 0 1 18 0
Butter Knife, best quality 0 12 0 0 5 0 0 6 0 0 7 0
Soup Ladle, best quality 0 12 0 0 16 0 0 17 6 1 0 0
Egg Spoons (gift), best quality 0 10 0 0 15 0 0 18 0 1 1 0

Complete Service £10 13 10 £15 16 6 £17 13 6 £21 4 0
Any article can be had separately at the same prices.
The Set of Four Corner Dishes (forming eight dishes), £3 8s.; One Set of Four Dishers (one 20 in., one 16 in., and two 14 in.), £10 10s.; Cruet Frame (four glasses), 24s.; Size Tea and Coffee Service, £9 10s. A costly Book of Engravings, with prices attached, sent per post on receipt of 12 stamps. Best quality. Medium quality. Best quality.
Dozen Full Size Table Knives, Ivory Handles £2 4 0 £3 6 0 £12 12 0
Pair Regular Metal Carvers 0 7 6 0 11 0 0 15 6
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Complete Service £10 13 10 £15 16 6 £17 13 6 £21 4 0
Years. MAPPIN'S table knives still maintain their unrivalled superiority; all their blades, being their own Sheffield manufacture, are of the very first quality, with secure handles, which do not come loose in hot water, and the difference in price is occasioned solely by the superior quality and thickness of the ivory handles.
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VINES FROM SOUTH AFRICA.
DENMAN, INTRODUCER OF THE SOUTH AFRICAN PORT, SHERRY, &c., per dozen, bottles included. A pig's sample of each for 24 stamps. Wine in cask reduced free to any railway station in England.
(Extract from the *Lancet*, July 10, 1858.)
THE WINES OF SOUTH AFRICA.—We have visited Mr. Denman's stores, selected in seven samples of wine, and have subjected them to careful analysis. Our examination has extended to an estimation of their bouquet and flavor, the acidity and sweetness, the amount of wine stone, the strength in alcohol, and particularly to their purity. We have to state, that these wines, though branded to a much less extent than Sherry, are, on the average, nearly as strong; that they are pure, wholesome, and perfectly free from adulteration; indeed, considering the low price at which they are sold, their purity is remarkable.
EXCELLENCE OF BRANDY, Pale or Brown, 15s. per gallon, or 50s. per dozen. With extra cash. Country order must contain a remittance. Crossed cheques, Bank of France. Price lists, with Dr. Hassall's analysis, forwarded on application.
JAMES L. DENMAN, 65, Fenchurch-street, corner of Railway-place, London.

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MIDLAND WORKS, BIRMINGHAM.
BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGONS.
IN STOCK.—FOR SALE OR HIRE.

THE RAILWAY CARRIAGE COMPANY,
OLDBURY, NEAR BIRMINGHAM.
MANUFACTURERS OF EVERY DESCRIPTION OF RAILWAY PLANT AND IRONWORK.
NEW AND SECOND-HAND RAILWAY WAGONS ALWAYS IN STOCK FOR SALE OR HIRE.
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RAILWAY WAGONS FOR HIRE.
Apply to the SECRETARY, 3, Newhall-street, Birmingham.

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LOCOMOTIVE TYRE BARS OF EVERY DESCRIPTION, FOR ENGINES, CARRIAGES, AND RAILWAY WAGON WHEELS.
STEEL IRON for springs, MERCHANT and OTHER IRONS MANUFACTURED.
WILLIAM F. HOYLE, Proprietor.

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PIG, BAR, PLATE IRON, CHAINS, ANCHORS, FORGINGS, GIRDERS, PIPES, FOUNDRY WORK.
LONGRIDGE'S WEST HARTLEY STEAM COALS (on the Admiralty List).
COOKING, GAS, HOUSE, AND SMITH'S COALS, COKE, FIRE-BRICKS, &c.

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FORTH COMPANY. LLOYDS, FOSTER, AND CO.
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RAILS OF (OR SURFACED WITH) PATENT HARDENED IRON, CAN BE ORDERED direct from the following WORKS:—
PARKGATE. LLOYD, FOSTER, AND CO.
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MONKLAND.
For durability, these rails have never been surpassed. They wear out several sets of ordinary rails, and do not laminate.
Full information, and terms for use of patent right, can be obtained of Messrs. CONNELL and HORE, 3, Princes-street, Westminster; and of Mr. S. THOMSON, Bradford-street, Birmingham. Mr. THOMSON also receives orders for Mr. MORRIS STIRLING'S Patent Iron and Rails.

MESSRS. R. & J. COUPE, ENGINEERS AND IRONFOUNDERS,
MANUFACTURERS OF HORIZONTAL HIGH-PRESSURE STEAM-ENGINES, from 10 to 200-horse power; the larger description of engines mounted with their IMPROVED EQUILIBRIUM SLIDE PISTON VALVE, which has proved itself so eminently adapted for winding and other slides.
Clayton Foundry, Wigan.

CONDIE'S PATENT STEAM HAMMERS.—FIRST-CLASS STEAM HAMMERS, from 10 cwt. to 7 tons, suitable for jobbing, forging, puddling, and the smith's shop of engineers, ship-builders, wagon builders, agricultural implement makers, railway and steam navigation companies, &c.—Govan Bar Ironworks, Glasgow.
JOHN CONDIE.
INCORPORATIONS IN STEAM BOILERS ARE EFFECTUALLY REMOVED AND PREVENTED BY USING EDWD. MUFF'S COMPOSITION.—Testimonials, with directions for use, may be had at Tysers Hall, near Bradford, by post or otherwise, where orders and communications will receive prompt attention.

TO PREVENT ACCIDENTS BY WINDING OVER THE HEAD GEAR, USE THE PATENT SELF-ACTING STEAM BREAK, which at every lift from the mine shuts off the steam from the winding engine and applies the break; also records the number of lifts made.—For illustrated circular and price, apply to HETH OGDEN, engineer, St. Mary's, Manchester.

VENTILATION OF COAL MINES.
BIRAM'S PATENT ANEMOMETERS.
12 inch £4 4 0
6 inch 3 3 0
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DIALS IN GREAT VARIETY.
HEDLEY'S NEW DIAL, ADMIRABLY ADAPTED FOR MINES OF
To be had of the manufacturer,
JOHN DAVIS, MATHEMATICAL INSTRUMENT MAKER, DERBY.
Priced list on application.

VENTILATION OF MINES.—THE ATTENTION OF PROPRIETORS OF MINES IS CALLED TO LEMHILL'S PATENT VENTILATOR, capable of exhausting 15,000 to 120,000 cubic feet of air per minute, at a trifling cost.—Apply for particulars to Mr. T. LAURENCE, 19, Eldon-square, Newcastle; Messrs. MORTON and CO., Leeds; or Mr. TESTUAT, 4, Stow-hill, Newport, Monmouthshire.

SAFETY LAMP (W. WILKINS'S PATENT) FOR MINES, SEWERS, GAS WORKS, GAS FITTERS, HOLDS OF SHIPS, and all purposes where danger from explosion of gas is to be apprehended. NO GAUGE TO INTERCEPT THE LIGHT. BURNS EIGHT HOURS FOR ONE PENNY OF SIMPLE CONSTRUCTION, AND NOT LIKELY TO GET OUT OF ORDER. Price 20s.
Apply to Messrs. W. WILKINS AND CO.,
Lighthouse Engineers to the Honourable Corporation of Trinity House, 24 and 25, LONG ACRE, LONDON, W.C.

SIR H. DAVY'S MINERS' LAMPS, WARRANTED AT FIVE SHILLINGS EACH, BY THOS. F. HAWKINS, MANUFACTURER, 27, DALE END, BIRMINGHAM.

TO COLLIERY PROPRIETORS.—TO PREVENT EXPLOSIONS BY MINERS TAMPERING WITH SAFETY-LAMPS, USE ROBINSON'S AND OGDEN'S PATENT SELF-LOCKING LAMP, possessing the following advantages:—
1. THE GAZE CANNOT BE REMOVED, except by the application of a fixed machine key.
2. SIMPLICITY OF LOCKING.
3. THE APPLICATION OF AN ENAMELLED REFLECTOR.
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240	Botallack (tin), Cop. St. Just	21 0 0	4 1/2	4 1/2	23 0 0	2 10 0
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300	Corn Breva (copper), Illogan	30 0 0	37	37	24 10 0	2 0 0
2000	Collacombe (copper), Lamerion	5 0 0	12 1/2	12 1/2	25 0 0	8 0 0
10000	Copper Mines of England	25 0 0	26	26	25 0 0	8 0 0
300000	Doitto (stock)	100 0 0	25	25	25 0 0	8 0 0
1000	Cradock Moor (copper), St. Cleer	8 0 0	30	29 31	2 4 0	0 5 0
867	Cwm Erida (lead), Cardiganshire	7 10 0	14	14	0 10 0	0 10 0
125	Cwmystwith (lead), Cardiganshire	60 0 0	300	300	145 0 0	0 5 0
4076	Devon and Cornwall (copper)	4 6 3	9	12 14	0 7 6	0 2 0
1024	Devon (tin), Cop. St. Just	1 0 0	460	455 460	439 0 0	7 0 0
235	Dulcote (copper), tin, Camborne	128 17 6	200	200	62 0 0	0 5 0
300	East Dean (lead), Cardiganshire	32 0 0	110	105 110	54 0 0	3 0 0
2048	East Falmouth (copper), Gwennap	2 0 0	3	3	0 7 6	0 2 0
128	East Pool (tin), Cop. St. Just	24 5 0	175	175	305 0 0	2 10 0
5700	Exmouth (silver-lead), Christow	4 14 0	8	8	3 15 0	0 2 0
140	Eyan Mining Co. (lead), Derbyshire	5 0 0	38	38	18 13 4	1 0 0
243	Graubler and St. Aubyn (cop.) (S.E.)	109 10 0	135	142 147 1/2	17 0 0	3 0 0
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1024	Herodford (lead), near Liskeard	8 10 0	10	10	4 7 6	0 10 0
2500	Isle of Man, Limited (lead)	25 0 0	42	42	58 8 3	1 0 0
160	Levant (copper), tin, St. Just	2 10 0	105	105	107 0 0	0 5 0
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5000	Mendip Hills (lead), Somerset	3 15 0	13 1/2	13 1/2	13 13 4	0 5 0
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1000	Pulbrook (tin), St. Agnes (Preferential)	15 0 0	5	5	18 11 9	1 0 0
1772	ditto ditto (Old and ditto)	—	—	—	1 7 0	0 7 0
540	Providence (tin), Uny Lelant (S.E.)	20 13 2	64	61 63	79 4 6	3 0 0
2500	Rhosdyrol and Bacheland (lead)	11 5 0	12	12	0 16 0	0 3 0
15000	Ruanidan Colliery Company, Limited	0 5 0	3 1/2	3 1/2	0 10 1/2	0 1 0
250	South Cardon (cop., tin), St. Cleer	2 10 0	410	400 410	446 0 0	8 0 0
256	South Cardon (cop., tin), St. Cleer	2 10 0	410	400 410	446 0 0	8 0 0
512	South Tolgus (cop., tin), Redruth	8 0 0	69	77 80	7 10 0	0 2 0
496	South West France, Illogan (S.E.)	18 18 0	235	230 235	310 5 0	0 5 0
2000	St. Day United (tin and copper)	2 0 0	12 1/2	11 12 1/2	0 3 6	0 1 0
470	St. Ives Consols (tin), St. Ives	16 0 0	37 1/2	35 37 1/2	920 0 0	2 10 0
2000	Tincroft (cop., tin), Pool, Illogan (S.E.)	9 0 0	3 1/2	3 1/2	8 18 6	0 5 0
20000	Valley of Towy (lead), Carmarthenshire	0 12 6	13 1/2	12 13 1/2	0 5 0	0 1 0
512	Wendron Consols (tin), Wendron	23 7 8	43	43	3 0 0	1 0 0
6000	West Bassett (copper), Illogan (S.E.)	1 10 0	23	21 22	15 3 0	0 5 0
256	West Cardon (cop., tin), Redruth	8 0 0	13 1/2	13 1/2	287 5 0	2 0 0
6400	West Fowey Consols (tin and copper)	4 0 0	6 1/2	6 1/2	0 15 0	0 2 0
400	West Wheal Seton (cop.), Camborne	38 10 0	295	290 295	146 0 0	7 0 0
240	Wheal Bai (tin), St. Just	15 0 0	18	18	3 0 0	0 10 0
512	Wheal Bassett (copper), Illogan (S.E.)	5 9 6	215	210 220 1/2	507 10 0	6 0 0
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128	Wheal Friendship (copper), Devon	50 0 0	90	90	2385 10 0	10 0 0
448	Wh. Margaret (tin), Uny Lelant (S.E.)	19 15 0	62 1/2	63 65	93 10 0	3 0 0
1024	Wh. Mary Ann (tin), Menheniot (S.E.)	8 0 0	48 1/2	44 45	40 17 6	2 0 0
80	Wheal Gwilym (tin), Cornwall	70 0 0	30	30	225 13 0	0 5 0
1040	Wh. Trevelyan (sil.-id.), Liskeard (S.E.)	4 10 0	29 1/2	29 30	34 10 0	1 0 0
4096	Wheal Wrey (lead), St. Ives	1 14 0	23 1/2	23 1/2	2 12 6	0 2 0
5000	Wicklow (copper), Wicklow	5 0 0	38 1/2	38 1/2	30 5 6	1 0 0

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1624	Ballewidden (tin), St. Just	11 5 0	5	5	12 5 0	0 5 0
2000	Brightside & Froggatt Grove, Derbyshire	3 0 0	3 1/2	3 1/2	3 0 0	0 5 0
1000	Brynford Hall (lead), Flintshire	25 0 0	50	50	13 0 0	0 5 0
1000	Bryntal, Llanidloes, Montgomeryshire	8 0 0	11 1/2	10 11 1/2	0 5 0	0 5 0
390	Budnick Consols (tin), Pellan	2 6 6	7	6 1/2	0 10 0	0 10 0
6000	Bwlch (silver-lead), Cardiganshire	3 2 6	1 1/2	1 1/2	0 2 6	0 2 6
2348	Carnyorth (cop., tin), Camborne	4 0 0	4 1/2	4 1/2	0 15 0	0 2 0
256	Cardon (cop., tin), Cornwall	20 0 0	50	60 70	25 0 0	0 2 0
30000	Craven Moor, Limited (lead), Yorkshire	0 10 0	3 1/2	3 1/2	0 9 0	0 9 0
280	Derwent Mines (sil.-lead), Durham	300 0 0	150	150	122 0 0	10 0 0
672	Ding Dong (tin), Guilva	35 0 0	8 1/2	7 1/2	16 7 6	1 0 0
12800	Drake Walls (tin), Cop. Calstock	2 1 0	1 1/2	1 1/2	0 13 6	0 2 0
1024	East Wheal Margaret (tin), Cop.	7 17 6	2	1 1/2	0 5 0	0 5 0
4448	Fowey Consols (copper), Tynardreath	4 0 0	3 1/2	3 1/2	41 4 3	0 6 0
4916	General Mining Co. for Ireland (cop., id.)	4 0 0	1 1/2	1 1/2	1 0 8	0 3 0
2500	Goghan (silver-lead), Cardiganshire	12 5 0	2 1/2	2 1/2	22 0 0	0 5 0
1024	Gonnamore (cop., tin), St. Cleer	8 0 0	7 1/2	7 1/2	0 15 0	0 2 0
26666	Gr. Wh. Vor (tin), Helston (S.E.)	8 17 6	3 1/2	3 1/2	0 5 0	0 5 0
119	Great Work (tin), Gernone	100 0 0	110	110	231 10 0	7 0 0
6000	Hingston Down Cons. (cop.), Calstock	3 15 0	3 1/2	3 1/2	2 16 0	0 2 0
2000	Holyford (copper), near Tipperary	11 0 0	8 1/2	8 1/2	4 2 6	0 5 0
20	Luxey Mining Company, Isle of Man	100 0 0	1000	1000	1420 0 0	50 0 0
5000	Levis Mines (tin), Cop. St. Erth	6 9 11	2 1/2	2 1/2	0 10 0	0 10 0
8000	Levis Valley (copper), Cardon	4 10 6	2 1/2	2 1/2	0 5 6	0 5 0
5000	Merilyn (lead), Flint	3 2 6	3 1/2	3 1/2	1 11 0	0 2 0
5000	Nauton (cop., tin), Camborne	4 0 0	1 1/2	1 1/2	0 11 0	0 2 0
200	North Pool (copper), tin, Pool	40 18 0	5 1/2	5 1/2	324 0 0	2 0 0
700	North Rosecar (copper), Camborne	13 0 0	22 1/2	21 1/2	750 0 0	4 0 0
512	Rosewarne United (cop., tin), Gwennap	15 0 0	30	30	32 10 0	1 0 0
12000	Sordridge Cons. (cop., tin), Whitechapel (S.E.)	0 6 0	16 1/2	14 15 1/2	0 10 0	0 2 0
128	South Crinnis (copper), St. Austell	19 0 0	285	285	60 0 0	20 0 0
794	Sparrow Cons. (tin), St. Just, Cornwall	3 15 0	3 1/2	3 1/2	8 5 0	0 2 0
280	Spearman Moor (copper), St. Just	23 7 8	15	15	4 5 0	0 10 0
370	St. Aubyn and Grylls (cop., tin), Breage	6 4 4	2 1/2	2 1/2	0 17 6	0 2 0
9600	Tamar (tin), Cornwall	10 0 0	20 1/2	20 1/2	4 13 6	0 2 0
572	Trevelyan Consols (tin), St. Ives	11 10 0	9 1/2	9 1/2	1 15 0	1 0 0
120	Trevelyan (cop., tin), Gwennap	10 15 0	15	15	403 13 6	2 10 0
496	Trevelyan (sil.-id.), Menheniot, Cornwall	2 18 0	3 1/2	3 1/2	1 12 0	0 3 0
100	Trumpet Consols (tin), near Heaton	95 0 0	11	11	55 0 0	5 0 0
400	United Mines (copper), Gwennap	40 0 0	120 1/2	127 1/2	61 5 0	2 0 0
512	West Damsel (copper), Gwennap	12 17 0	115	115	22 0 0	2 0 0
1024	West Providence (tin), St. Erth	21 11 7	1 1/2	1 1/2	3 1 9	0 10 0
6140	Wheal Arthur (copper), Calstock	2 10 0	6 1/2	6 1/2	1 10 0	0 10 0
1024	Wheal Cliff (copper), Gwennap	5 3 4	30	15 20	42 0 0	3 0 0
512	Wheal Jane (silver-lead), Ales	3 10 0	25	25	8 10 0	1 10 0
1000	Wheal Kitty (tin), St. Agnes	4 10 0	3 1/2	3 1/2	0 6 0	0 3 0
1024	Wheal Kitty (tin), Uny Lelant (S.E.)	1 7 2	9	8 1/2	0 6 0	1 0 0
430	Wheal Lovell (tin), Wendron	33 0 0	7	7	31 0 0	1 0 0
100	Wheal Mary (tin), Lelant	36 3 0	230	230	248 5 10	5 0 0
240	Wheal Reeth (tin), Uny Lelant	39 10 0	22 1/2	20 21	40 10 0	3 0 0
198	Wheal Seton (tin), Cop. Camborne	107 0 0	130	130	286 10 0	2 0 0
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15000	Llanes (id.), Pozo Ancho, Spain (S.E.)	3 0 0	8 1/2	7 1/2	5 15 6	0 5 0
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103616	Marquitta and New Granada (S.E.)	1 0 0	1	1	1 0 0	0 1 6

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10000	Alten & Quangenau (cop.), Norway	16 10 0	3	3	4 5 0	0 15 0
8676	North British Australian (S.E.)	1 0 0	3	3	0 31 0	1 3 0
10000	Pontgault (sil.-lead), France (S.E.)	20 0 0	5 1/2	4 1/2	1 0 0	0 10 0
7000	Royal Santiago (copper), Cuba (S.E.)	16 15 0	1 1/2	1 1/2	32 0 0	1 5 0
11000	St. John del Rey (L.), Brazil (S.E.)	15 0 0	1 1/2	1 1/2	35 7 6	1 0 0
4374	Univ. Mexican (L.), Mexico (S.E.)	28 5 0	3 1/2	2 1/2	1 16 6	0 4 0

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20000	Acadian Charcoal Iron, Nova Scotia [L.]	8 10 0	6	..	Nov. 1858
20000	Australian (copper) [S.E.]	7 5 0	3/4	1/4 3/4	..
75000	Ban Accord, South Australia (copper) [L.] [S.E.]	0 10 0	..	..	..
10000	Brazilian Imperial (S.E.)	27 5 0	2 1/2	1 1/2 2	..
10000	Brazilian Land and Mining, Altopaque [L.] [S.E.]	5 0 0	2 1/4	1 3/4 2 1/4	..
6000	Central American (silver) [L.]	7 0 0	2 1/4	..	..
60000	Clarendon Consols (copper), Jamaica [S.E.]	0 12 6	..	..	..April, 1858 ..Oct. 1857
83040	Colome Mining Company (lead), Rhenish Prussia	1 4 0	3/4	..	..June, 1856
10000	Copio Mining [L.]	10 0 0	13	..	..
75000	Dun Mountain (copper), New Zealand [L.] [S.E.]	1 0 0	10	3/4 3/4	..
15000	East Indian Coal, Calcutta [L.]	10 0 0	10	..	..
20000	Ellerslie and Barrow, Jamaica	0 16 0	1 1/2	..	..
8000	English and Canadian Mining Company Limited, Quebec	3 15 0	..	..	..
2000	English Ridge (copper), Newfoundland [L.]	0 10 0	5	..	..
25000	Fortuna (lead), Spain [S.E.]	2 0 0	1 1/2	1 1 1/2	..July, 1850
10000	Great Barrier Land, Mining, &c., New Zealand	1 0 0	1 1/4	..	..
2300	Kuzibeth Mining Association, Germ.	4 0 0	1	..	..
90000	Mount Carbon (cop.), Virginia	1 0 0	..	..	..
20000	New Granada (gold) [S.E.]	0 0 0	..	3/4 3/4	..
20000	New Granada (gold) [S.E.]	0 15 0	2 3/4	..	..Nov. 1858
40000	New Granada (gold) [S.E.]	0 20 0	..	..	..
20000	Newland Mining Association [L.]	0 10 0	..	3/4 3/4	..
80000	North Rhine Copper of South Australia, Limited [S.E.]	1 0 0	..	3/4 3/4	..
20000	Nouveau Monde (copper)	1 0 0	..	..	..
20000	Port Phillip (gold), Clunes [S.E.]	1 0 0	..	3/4 3/4	..
6000	Quartz Reducton [L.]	1 0 0	..	..	..
6000	Rosie and Canada (lead)	9 0 0	—	..	..Nov. 1858
85415	Strathbairn (copper) [L.]	1 0 0	..	..	..
2000	Tark's Head (copper), Newfoundland [L.]	0 10 0	5	..	..
20000	Victor Emanuel Val (copper), Piedmont [L.]	1 0 0	1	1	..
20000	Wollington Copper Mine Company, West Australia	95 0 0	100	..	..
1000	Western Africa Malachite	0 17 0	18s.	..	..Aug. 1859
25000	Wildberg (silver-lead, copper)	2 0 0	..	..	..
20000	Worthing (copper), South Australia [L.]	0 14 0	..	..	..June, 1850

THE MINING SHARE LIST.

DIVIDEND MINES.

Shares.	Mines.	Paid.	Non-Paid.	Business.	Dividends For Share.	Last Paid.
5130	Alfred Consols (cop.), Philack [S.E.]	2 11 0	8 8 1/2	...	19 5 0	2 6-Oct. 1858
10000	Banfield (copper), Devon	0 12 6	4	...	0 7 1/2	0 7 1/2-May. 1858
4000	Banfield United (copper), Tavistock	2 6 8	6 1/2	...	10 8 0	3 0-Dec. 1858
240	Bozean (tin), St. Just	20 10 0	37 1/2	...	23 0 0	1 0-Nov. 1858
2000	Botallack (tin, copper), St. Just	91 5 0	205	...	425 5 0	2 10-Oct. 1858
4000	Calstock Consols (copper)	5 0 0	4 1/2	...	0 2 0	2 6-Dec. 1857
1000	Carn Brea (copper, tin), Illogan	15 0 0	67 1/2	...	243 10 0	2 0-Aug. 1858
500	Ceth Cwin Ilwryn (lead), Cardiganshire	35 0 0	37	...	5 0 0	2 0-Mar. 1858
3000	Collacombe (copper), Llanerth	5 0 0	12 1/2	...	2 5 0	0 6-Dec. 1857
12000	Copper Miners of England	25 0 0	28	...	7 1/2 per cent.	Half-yrly.
100000	Ditto ditto (stock)	100 0 0	25	...	1 per cent.	Half-yrly.
1055	Craddock Moor (copper), St. Cleer	8 0 0	30	...	2 4 0	0 6-Nov. 1858
867	Cwm Erwin (lead), Cardiganshire	7 10 0	14	...	0 10 0	0 10-Nov. 1858
128	Cwmystwith (lead), Cardiganshire	0 0 0	300	...	145 0 0	0 5-Oct. 1858
4076	Devon and Cornwall (cop.), Tavistock [S.E.]	4 6 3	9	...	0 7 0	2 6-April, 1858
1024	Devon Gt. Cons. (cop.), Tavistock [S.E.]	1 0 0	460	...	639 0 0	7 0-Nov. 1858
355	Dolowath (copper, tin), Camborne	128 17 0	200	...	492 10 0	5 0-Dec. 1858
320	East Devon (lead), Cardiganshire	32 0 0	110	...	54 0 0	3 0-Dec. 1858
2048	East Pannouth (copper), Gwennap	2 0 0	3	...	0 7 0	2 6-Jan. 1858
128	East Pool (tin, copper), Pool, Illogan	24 5 0	175	...	305 0 0	2 10-Aug. 1858
5700	Exmouth (silver-lead), Christow	4 14 0	8	...	3 15 0	2 6-April, 1858
1400	Eyan Mining Co. (lead), Derbyshire	5 0 0	38	...	18 13 4	1 0-Aug. 1858
243	Gambler and St. Aubyn (cop.) [S.E.]	109 10 0	135	...	17 0 0	3 0-Nov. 1858
1000	Great South Tolu (S.E.) Redruth	0 14 6	13 1/2	...	3 7 0	0 10-Dec. 1858
6024	Herodasfoot (lead), near Liskeard	8 10 0	7	...	4 7 0	0 12-June, 1858
2550	Isle of Man, Limited (lead)	25 0 0	42	...	58 8 1/2	1 0-June, 1858
160	Levant (copper, tin), St. Just	2 10 0	105	...	1070 0 0	5 0-Nov. 1858
490	Lisburne (lead), Cardiganshire, Wales	18 15 0	100	...	317 10 0	2 0-Dec. 1858
5000	Mendip Hills (lead), Somerset	3 15 0	13 1/2	...	1 13 0	0 6-May, 1858
1800	Minera Mining Co., Ltd. (lead), Wrexham	25 0 0	110 1/2	...	35 12 0	2 10-Nov. 1858
30000	Mining Co. of Ireland (cop., lead, coal)	7 0 0	13 1/2	...	13 13 4	0 7-July, 1858
400	Newtownards Mining Co., Co. Down	50 0 0	35	...	55 0 0	1 0-July, 1858
6000	N. Wh. Basset (cop., tin), Illogan [S.E.]	nil	9	...	14 12 0	0 5-Aug. 1858
6400	Nar Consols (cop.), St. Blaize [S.E.]	1 2 6	17	...	32 15 0	0 10-Oct. 1858
1000	Phenix (copper, tin), Linkinhorne	100 0 0	410	...	294 10 0	25 0-Nov. 1858
10000	Polborno (tin), St. Agnes (referential)	15 0 0	5	...	18 11 8	1 0-July, 1858
1772	ditto ditto (Old and ditto)	15 0 0	5	...	17 0 0	7 0-Sept. 1858
500	Providence (tin), Uny Lelant [S.E.]	20 13 2	64	...	79 4 6	3 0-July, 1858
2500	Rhosydwol and Bacheland (lead)	11 5 0	12	...	0 16 0	3 0-July, 1858
15000	Ruanidan Colliery Company, Limited	0 5 0	3 1/2	...	0 1 10 0	1 0-Aug. 1858
250	South Canaan (cop.), St. Cleer	2 10 0	410	...	246 0 0	8 0-Nov. 1858
512	South Tolu (cop.), Redruth, Cornwall	8 0 0	80	...	79 10 0	2 0-Nov. 1858
490	South West France, Illogan [S.E.]	18 18 9	235	...	310 5 0	5 0-Nov. 1858
20000	St. Day Union (tin and copper)	2 0 0	125	...	3 6 0	1 0-Nov. 1858
470	St. Ives Consols (tin), St. Ives	15 0 0	37 1/2	...	920 10 0	2 10-Nov. 1858
6000	Tincroft (cop., tin), Pool, Illogan [S.E.]	9 0 0	3 1/2	...	8 18 6	0 5-Sept. 1858
20000	Val of Towy (lead), Carmarthen [S.E.]	0 12 6	135	...	0 5 9	0 10-July, 1858
512	Wendron Consols (tin), Wendron	23 7 8	43	...	3 0 0	1 0-Sept. 1858
2500	West Basset (copper), Illogan [S.E.]	1 10 0	23	...	15 3 0	0 9-Nov. 1858
2500	West Canaan (cop.), Liskeard [S.E.]	20 0 0	135	...	287 5 0	2 0-May, 1858
400	West Fowey Consols (tin and copper)	7 0 0	6 1/2	...	0 2 6	2 6-Mar. 1858
400	West Wheal Seton (cop.), Camborne	38 10 0	295	...	146 0 0	7 0-Dec. 1858
240	Wheal Bui (tin), St. Just	15 0 0	18	...	507 10 0	0 10-Nov. 1858
512	Wheal Bui (tin), Illogan [S.E.]	5 0 0	9 1/2	...	507 10 0	0 10-Nov. 1858
250	Wheal Butler (cop.), Redruth [S.E.]	5 0 0	180	...	895 0 0	5 0-Nov. 1858
400	Wheal Edward (cop.), Calstock [S.E.]	5 10 0	3	...	0 5 0	5 0-Mar. 1858
128	Wheal Friendship (copper), Devon	50 0 0	90	...	2385 10 0	10-Feb. 1858
445	Wh. Margaret (tin), Uny Lelant [S.E.]	19 15 0	62 1/2	...	93 10 0	3 10-Nov. 1858
1024	Wh. Mary Ann (id.), Menheniot [S.E.]	8 0 0	46 1/2	...	40 17 6	2 5-Dec. 1858
80	Wh. Owles, St. Just, Cornwall	70 0 0	300	...	225 13 0	5 0-Aug. 1858
1040	Wh. Trevelyan (sil.-id.), Liskeard [S.E.]	4 10 0	29 1/2	...	34 10 0	1 0-Oct. 1858
4000	Wheal Wrey (lead), St. Ives	14 0 0	24 1/2	...	2 12 6	0 2-Dec. 1857
5000	Wicklow (copper), Wicklow	5 0 0	38 1/2	...	30 5 6	1 10-July, 1858

MINES WITH DIVIDENDS IN ABEYANCE.

1624	Blaiddalen (tin), St. Just	11 5 0	5	...	12 5 0	0 5-Jan. 1854
1240	Brightdale & Froggatt Grove, Derbyshire	3 0 0	3 1/2	...	3 0 0	0 5-April, 1858
100	Bryndall Hall (lead), Flintshire	25 0 0	50	...	13 0 0	0 5-July, 1858
1000	Bryndall, Llanidloes, Montgomeryshire	8 5 0	11 1/2	...	0 5 0	0 5-July, 1858
290	Budlich Consols (tin), Perran	2 6 6	7	...	0 10 0	0 10-Mar. 1857
6000	Burich (silver-lead), Cardiganshire	3 6 6	1 1/2	...	0 2 6	2 6-Aug. 1856
2048	Carnyarth (tin), St. Just	4 15 0	4 1/2	...	0 15 0	0 3-June, 1858
250	Cardunrow (cop., tin), Camborne	20 0 0	55	...	85 0 0	2 0-June, 1857
3000	Craven Moor, Limited (lead), Yorkshire	0 10 0	3 1/2	...	0 9 0	0 9-Feb. 1856
250	Dewerth Mines (sil.-lead), Durham	300 0 0	150	...	122 0 0	10 0-Nov. 1857
672	Ding Donna (tin), Gwent	3 15 0	7 1/2	...	16 7 0	0 10-June, 1857
12800	Drake Walls (tin, copper), Calstock	2 0 0	180	...	0 13 0	0 2-Sept. 1857
1024	East Wheal Margaret (tin, copper)	7 17 6	2 1/2	...	0 5 0	0 5-Jan. 1854
4940	Fowey Consols (copper), Tywardreath	4 0 0	3 1/2	...	41 4 3	0 6-Feb. 1857
4445	General Mining Co. for Ire. (cop., id.)	4 0 0	1 1/2	...	1 0 8	0 3-June, 1853
2000	Goginan (silver-lead), Cardiganshire	12 5 0	2 1/2	...	22 0 0	0 5-Sept. 1850
1024	Gonnamena (copper), St. Cleer	14 5 0	8 1/2	...	0 7 6	0 7-Dec. 1858
26666	Gt. Wh. Vor (tin, cop.), Helston [S.E.]	8 17 6	3 1/2	...	0 5 0	0 5-Oct. 1855
119	Great Work (tin), Gernoe	100 0 0	110	...	231 10 0	7 10-Feb. 1857
6000	Hington Down (cop.), Calstock	3 15 0	3 1/2	...	2 16 0	0 2-Feb. 1856
2000	Holyford (copper), near Tipperary	11 0 0	3 1/2	...	4 2 6	0 5-Jan. 1857
20	Lacey Mining Company, Isle of Man	100 0 0	1000	...	1420 0 0	50 0-June, 1857
5000	Levis Mines (tin, copper), St. Erth	6 9 11	2 1/2	...	0 10 0	0 10-Dec. 1855
8000	Marke Valley (copper), Cardan	4 10 6	2 1/2	...	0 5 6	0 3-Sept. 1855
5000	Merrilyn (lead), Flint	3 2 6	3 1/2	...	1 11 0	0 2-June, 1853
5000	Nantes & Penrhyn, Ltd. (£2 1/2 sha.)	2 5 0	1 1/2	...	0 1 6	0 6-April, 1858
200	North Pool (copper, tin), Pool	40 18 0	5 1/2	...	324 0 0	2 0-Dec. 1854
790	North Rosebar (copper), Camborne	13 0 0	22	...	32 10 0	4 0-Sept. 1853
512	Rosewarne (copper), Gwennap	3 0 0	30	...	12 0 0	0 10-June, 1857
12800	Sordridge Cons. (cop.), Whitechurch [S.E.]	0 6 0	16 1/2	...	0 10 0	0 2-July, 1857
128	South Crinias (copper), St. Austell	19 0 0	285	...	60 0 0	20 0-June, 1855
794	Spearne Cons. (tin), St. Just, Cornwall	3 13 0	3 1/2	...	8 8 6	0 2-Dec. 1853
250	Spearne Moor (copper), St. Just	23 7 8	15	...	4 5 0	0 10-June, 1856
970	St. Aubyn and Grylls (cop.), Breage	8 8 4	2 1/2	...	0 17 6	0 7-April, 1852
6000	Tamar Cons. (sil.-id.), Beeralston [S.E.]	4 10 0	1 1/2	...	4 13 6	0 2-Feb. 1856
672	Trelon Consols (tin), St. Ives	11 10 0	9 1/2	...	1 15 0	1 0-Feb. 1854
128	Trevelian (cop.), Gwennap, Cornwall	15 10 0	15	...	403 13 6	2 10-April, 1853
4000	Trevelian (sil.-id.), Menheniot, Cornw.	3 0 0	3 1/2	...	5 1 6	0 5-Sept. 1857
100	Trumpet Consols (tin), near Helston	95 0 0	11 1/2	...	5 0 0	5 0-Dec. 1854
400	United Mines (copper), Gwennap	40 0 0	120	...	61 5 0	2 0-Feb. 1856
512	West Damsel (copper), Gwennap	12 17 0	115	...	22 0 0	2 0-July, 1857
1024	West Providence (tin), St. Erth	21 17 0	1 1/2	...	23 1 9	0 10-April, 1857
6140	Wheal Arthur (copper), Calstock	2 10 0	3 1/2	...	1 6 0	0 6-Oct. 1855
1024	Wheal Charlotte, Perranarow	5 3 4	20	...	1 10 0	0 10-Sept. 1855
250	Wheal Clifford (copper), Gwennap	—	310	...	42 0 0	3 0-Oct. 1857
512	Wheal Jane (silver-lead), Ken	3 10 0	25	...	8 10 0	1 10-Oct. 1857
6000	Wheal Kitty (tin), St. Agnes	4 10 0	3 1/2	...	6 0 0	1 0-Sept. 1857
1024	Wheal Kitty (tin), Uny Lelant [S.E.]	4 10 0	3 1/2	...	6 0 0	1 0-Sept. 1857
430	Wheal Lead (tin), Wendron	33 0 0	7	...	31 0 0	1 0-Sept. 1856
100	Wheal Mary (tin), Lelant	36 3 0	250	...	248 5 10	5 0-Mar. 1858
240	Wheal Reeth (tin), Uny Lelant	39 10 0	22 1/2	...	40 10 0	3 0-Aug. 1852
193	Wheal Seton (tin, copper), Camborne	107 0 0	130	...	286 10 0	2 0-Oct. 1857
1024	Wheal Trevelyan (tin, cop.), Gwennap	12 2 6	2 1/2	...	10 2 6	0 7-Jan. 1854

* Dividends paid every two months. † Dividends paid every three months.

FOREIGN MINES.

2464	Burra Burra (cop.), South Australia	5 0 0	142	...	200 0 0	5 0-June, 1858
12000	Cobre Copier Co. (cop.), Cuba [S.E.]	40 0 0	40	...	86 12 0	1 0-Jan. 1858
10000	Copio Mining Company, Chile [S.E.]	16 0 0	13	...	5 18 0	0 10-Mar. 1858
7000	English and Australian [S.E.]	5 0 0	1 1/2	...	0 10 0	2 6-Sept. 1858
25000	Gen. Mining Assoc., Nova Scotia [S.E.]	20 0 0	21	...	13 10 0	0 17-July, 1858
15000	Linares (id.), Pozo Ancho, Spain [S.E.]	3 0 0	8 1/2	...	5 15 6	5 0-July, 1858
10000	Lustanion (or Fortuque) [S.E.]	1 15 0	1 dis.	...	0 8 0	0 2-June, 1858
100015	Marquitta and New Granada [S.E.]	1 0 0	1	...	1 0 0	0 6-July, 1858

FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

10000	Altent & Quenangen (un.), Norw.	16 10 0	3	...	4 5 0	0 15-Nov. 1853
88676	North British Australian [S.E.]	1 0 0	3 1/2	...	0 31 1	0 13-Feb. 1857
10000	Pontbland (sil.-lead), France [S.E.]	20 0 0	5 1/2	...	1 0 0	1 0-June, 1858
7000	Royal Santiago (copper), Cuba [S.E.]	16 15 0	1 1/2	...	33 0 0	1 5-July, 1848
11000	St. John del Rey [L.], Brazil [S.E.]	15 0 0	1 1/2	...	35 7 6	1 0-June, 1857
43174	Union Mexican (sil.), Mexico [S.E.]	28 5 0	3 1/2	...	1 16 6	0 4-Feb. 1853

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Non-Paid.	Bus. done.	Last Call.
20000	Acanth Charcoal Iron, Nova Scotia [L.]	8 10 0	6	..	Nov. 1858
20000	Acanth (copper) [S. E.]	7 5 0	3 1/2	3/4	..
75000	Bon Accord, South Australia (copper) [L.] [S. E.]	0 10 0	3 1/2	3/4	..
10000	Brazilian Imperial [S. E.]	27 5 0	2 1/2	1 1/2	..
10000	Brazilian Land and Mining, Altoparque [L.] [S. E.]	5 0 0	2 1/2	1 3/4	..
6000	Central American (silver) [L.]	7 0 0	2 1/2	..	April, 1858
60000	Clarendon Consols (copper), Jamaica [S. E.]	0 12 6	3 1/2	..	Oct. 1857
5000	Colonne Mining Company (lead), Rhensish Prussia	1 4 0	1 1/2	..	June, 1856
10000	Copioque Smelting [L.]	10 0 0	13	..	..
75000	Dun Mountain (copper), New Zealand [L.] [S. E.]	1 0 0	3 1/2	3/4	..
15000	East Indian Coal, Calcutta [L.]	10 0 0	10	..	..
20000	Ellerslie and Bardsley, Jamaica	0 16 0	1 1/2	..	..
2000	English and Canadian Mining Company Limited, Quebec	3 15 0	5	..	..
2000	English Ridge (copper), Newfoundland [L.]	0 10 0	5	..	..
25000	Fortuna (lead), Spain [S. E.]	2 0 0	1 1/2	1 1/2	July, 1858
10000	Great Barrier Land, Mining, &c., New Zealand	1 10 0	1 1/2	..	..
2309	Kluxthal Mining Association, Germ.	4 0 0	1	..	..
20000	Mount Carbon (coal), Virginia	1 0 0	1 1/2	..	..
20000	New Granada (gold) [S. E.]	1 0 0	3 1/2	3/4	..
10000	New Grand Duchy of Baden (silver-lead)	0 15 0	2 3/4	..	Nov. 1858
20000	Newfoundland Mining Association [L.]	2 0 0	3 1/2	..	..
40000	North Rhine Copper of South Australia [S. E.]	0 10 0	3 1/2	3/4	..
150000	Nouveau Monde (copper)	1 0 0	3 1/2	..	..
100000	Port Phillip (gold), Cinnas [S. E.]	1 0 0	3 1/2	3/4	..
80000	Quartz Reduction [L.]	1 0 0	3 1/2	..	..
6000	Rossie and Canaan (lead)	9 0 0	—	..	Nov. 1858
55416	Strathalbyn (copper) [L.]	1 0 0	—	..	..
2000	Turk's Head (copper), Newfoundland [L.]	0 10 0	5	..	..
35000	Victor Emmanuel Val d'Ossola, Piedmont [L.]	1 0 0	1	1	..
20000	Wellington Copper Mining Company, West Canada, Limited	0 10 0	1	..	..
1000	Waters Africa Malcheste	95 0 0	100	..	Aug. 1858
35425	Wheat Jamaica (copper)	0 17 0	13 1/2	..	..
72000	Wildberg (silver-lead, copper)	2 0 0	3 1/2	..	..
20000	Wernberg (copper), South Australia [L.]	0 14 0	50	50	June, 1858